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formerly COTTON Textile Industries

Textile Industries

PER SECT. 23

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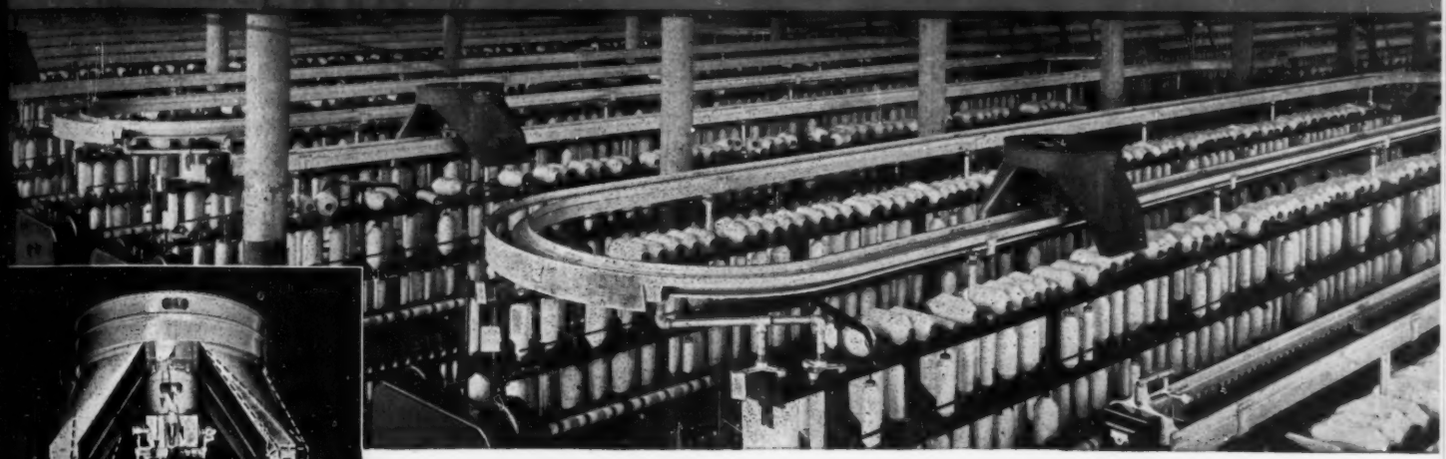
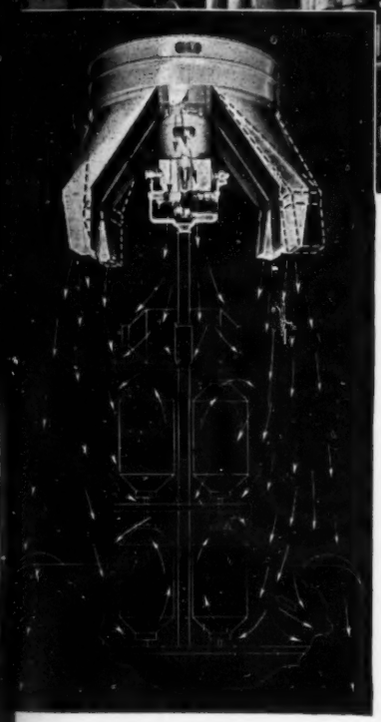




Spot the air where you want it

PARKS Traveling Cleaners have such fixed habits . . .

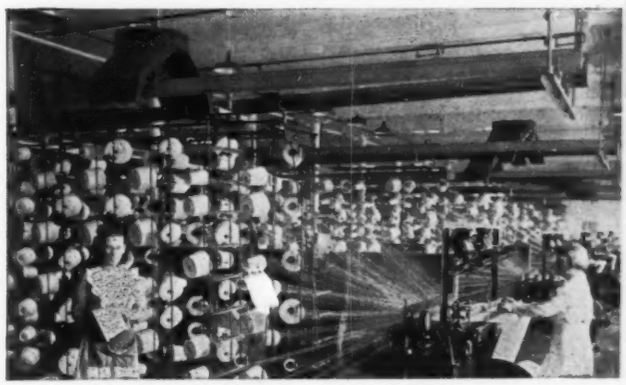
Every so often they give spinning frames (spoolers, warpers, winders, twisters, too) an effective fanning. Lint is shooed away before it has a chance to bunch.

Quality Improved

Cleaner yarn
Smoother yarn
Fewer piecings
Fewer seconds

Quantity Improved

Fewer stops
Fewer pickouts
Fewer cutouts
Fewer ends down



Warpers (winders, twisters, and spoolers not illustrated)

PARKS Traveling Cleaner Installations lessen waste

Lessen waste of valuable material. Lessen waste of valuable time. So much more is accomplished with so much less effort, Parks Traveling Cleaners have been known to pay for themselves in less than 18 months.

Not A Bad Investment!

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Turbomatic Self-cleaning Atomizers, High Duty Humidifiers, Automatic Airchanger, Central Station Systems with and without Refrigeration, Psychrostat Automatic Regulation

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Volume 111 Number 7

This is the roll you have been looking for.

Mill tests prove this new roll to be superior to the regular grooved rolls in handling many of the finer and more delicate fabrics. It has proved to be particularly helpful in weaving Nylon Marquisettes, French Crepes and similar weaves.

It holds cloth like an automobile tire holds the road—no side slip.

Test it on your desk, or any other smooth surface—the smoother the better. Press upon it very lightly and try to move it lengthwise to the right or to the left. YOU CAN'T MOVE IT.

That's it. You've found the secret of its powerful hold on the cloth. The secret that's hidden in the fine razor cuts * which we use in place of the conventional grooves.

All of the holding power of the covering is put to work—none of it is cut away.

These rolls hold better, last longer and do the job at less cost.

Order a trial lot today.

* Exclusive feature. Patent Pending.

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Style No. 1277.
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Dept. A
for quick handling.

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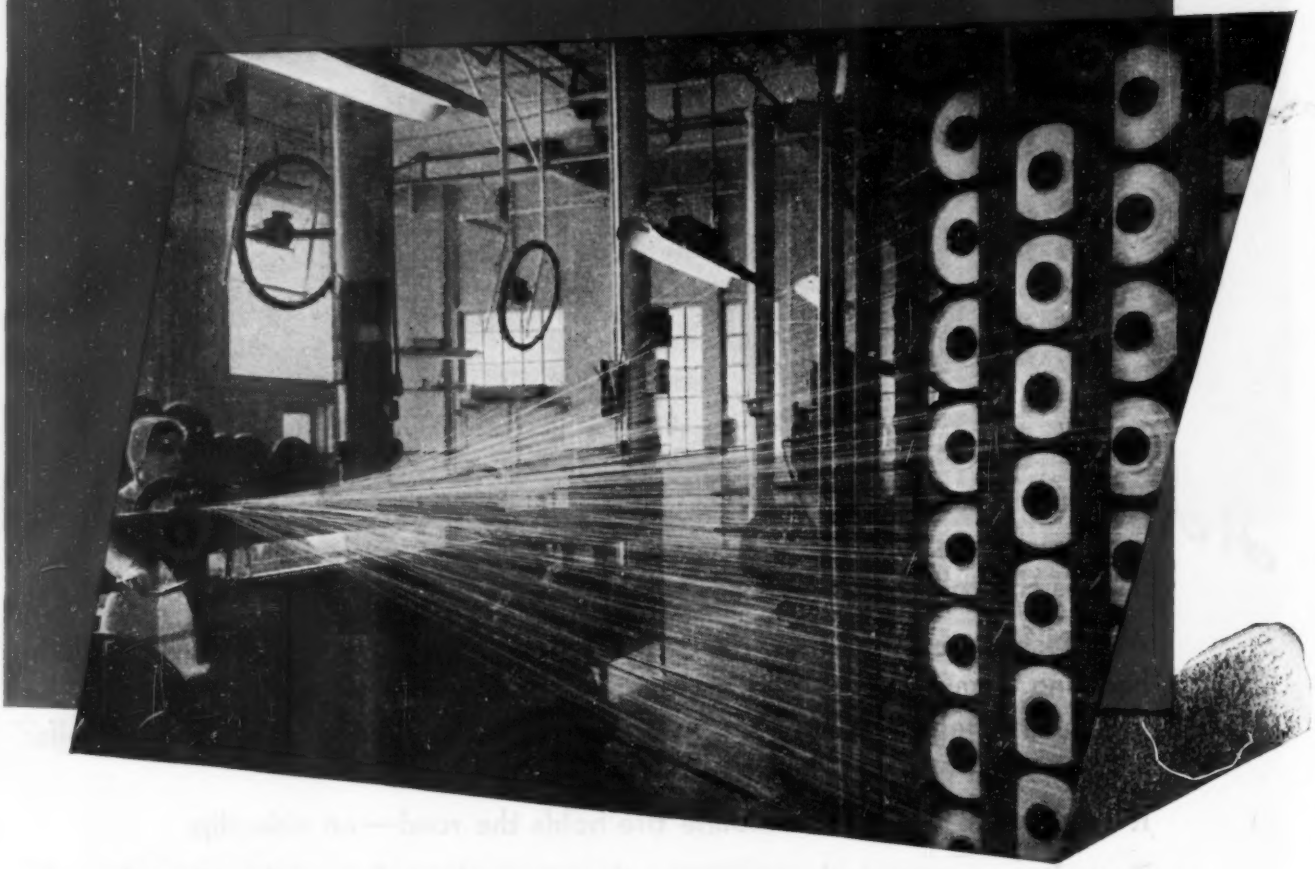

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From spindle to spool to warper beam, *Texaco Spindura Oils* help you produce more yarn . . . of better quality . . . at lower cost.

Spindura Oils resist oxidation and thickening, do not form gummy deposits. This means less spindle vibration and "drag", less hunting and lagging, fewer ends down, *reduced power consumption.*

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Texaco Spindura Oils meet all leading spindle manufacturers' specifications for lubrication of spinning, throwing, spooling and twisting machines. You can get *Spindura Oils* plus Texaco Lubrication Engineering Service — from the nearest of the more than 2500 Texaco distributing plants in the 48 States. Or write The Texas Company, 135 East 42nd Street, New York 17, New York.

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TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Tune in . . . TEXACO STAR THEATRE presents the NEW TONY MARTIN SHOW every Sunday night. See newspaper for time and station.

Volume 111, Number 7

Textile Industries

JULY, 1947

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Once in a while, though, we are told by a textile mill operator that he had built his equipment of stainless steel but wasn't getting the trouble-free runs he had expected. Upon investigation, the explanation in most cases has been quite simple. The equipment had been built with "stainless steel"—merely under the assumption that so long as it was labeled "stainless" it would serve the purpose. Actually, the term "stainless steel" covers a wide variety of superior steels—and each of these steels is designed for a specific type of application. Just as many of your best-grade textiles, while all of top quality, are designed for different uses, the same is true for this group of heat- and corrosion-resisting steels.

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Here's How

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Save Time and Money in Installing VEEDER-ROOT 2-3 PICK COUNTERS

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"THEY SAVE IN PICK COUNTER INSTALLATION COSTS!" . . . that's what mills say about Veeder-Root Compression Clamps. And that's because these teeth grip securely with 16 teeth, top and bottom. What's more, they save time in fitting the worm on the shaft . . . and if the shaft is a little out of size, the Compression Clamp takes care of it, without any need for shims.

This is one of the many advantages you get with Veeder-Root 2-3 Pick Counters . . . the counters that are quickly convertible right in your mill. Call the nearest Veeder-Root office today . . . have them send a trained Field Engineer to see you . . . and *show you* this exclusive money-saving advantage.

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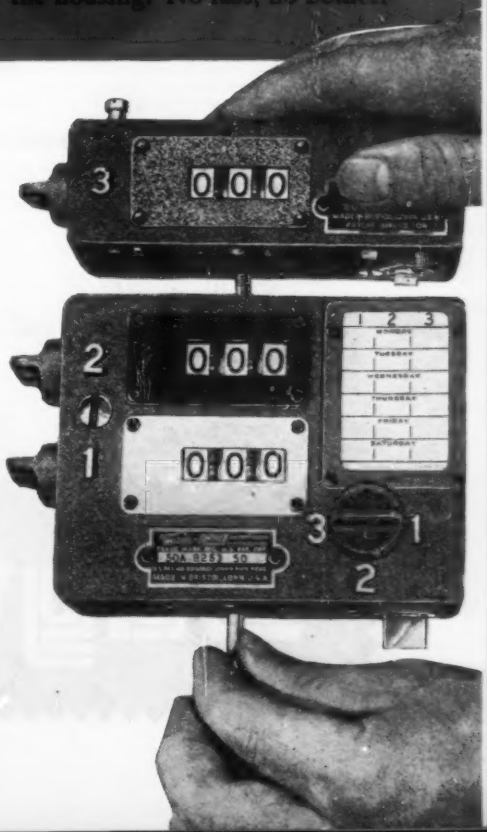
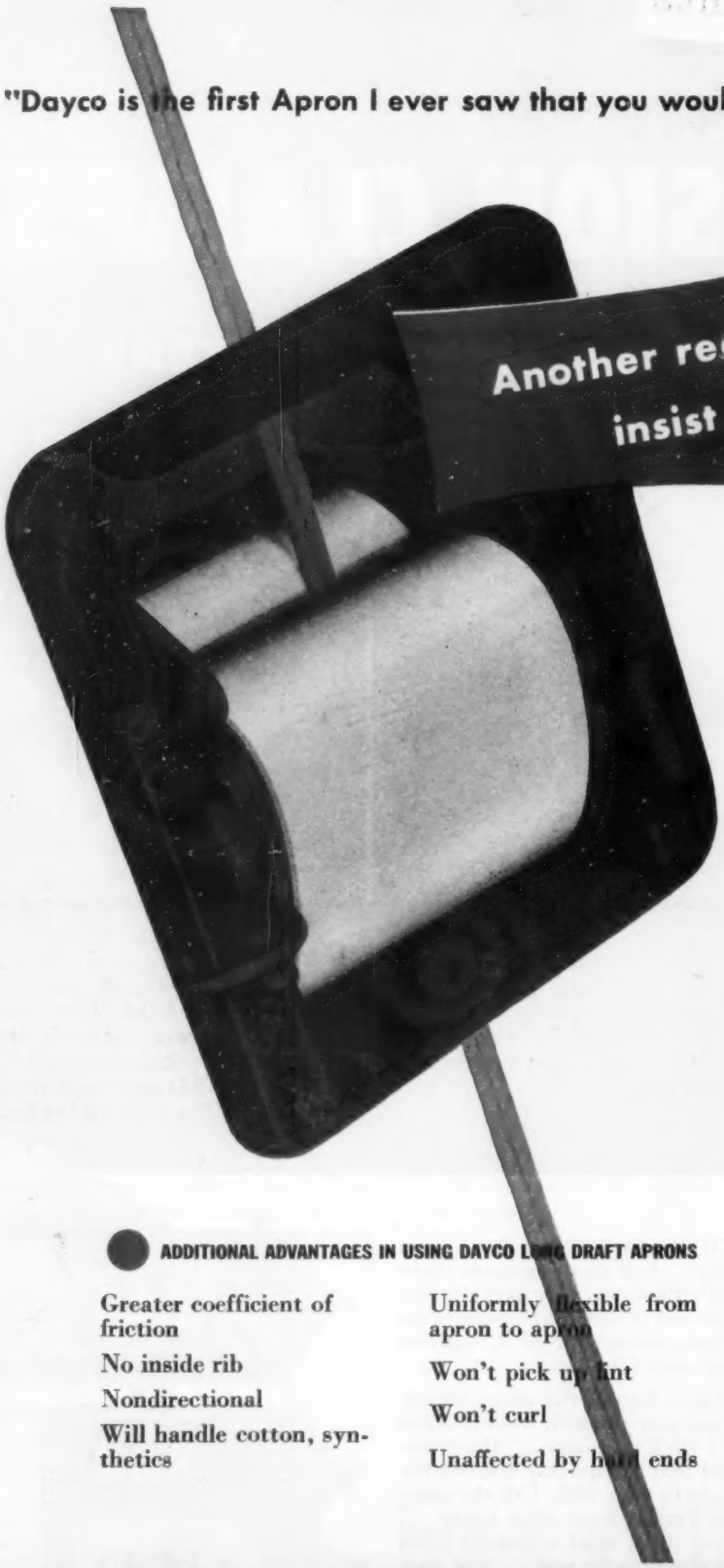
VEEDER-ROOT 2-3 Pick Counters

Quickly Convertible from 2 to 3-Shift Operation Right in Your Mill



"Dayco is the first Apron I ever saw that you wouldn't lose a few when you started up"



Another reason leading mill men insist on Dayco Aprons

Overseers from leading mills everywhere are insisting more and more that *every* frame in their spinning rooms be equipped with Dayco Long Draft Aprons. Manufactured of special non-stretch properties and engineered with the proper coefficient of friction *inside*, as well as on the outside, Daycos are built to stay on the frames and not flip off when starting up.

To insure production of uniform yarn, thickness of Daycos is controlled to 1/1000's, plus or minus. Daycos are manufactured without laps or splices and are finished smooth, inside, without rib. They will handle cotton, or synthetics better, more economically.

If you aren't using Dayco Aprons now, it will pay you to write for additional information, or have one of our textile product engineers call on you. We can show you additional ways to economical production and better quality yarn.

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- Greater coefficient of friction
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- Nondirectional
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- Won't pick up lint
- Won't curl
- Unaffected by hard ends

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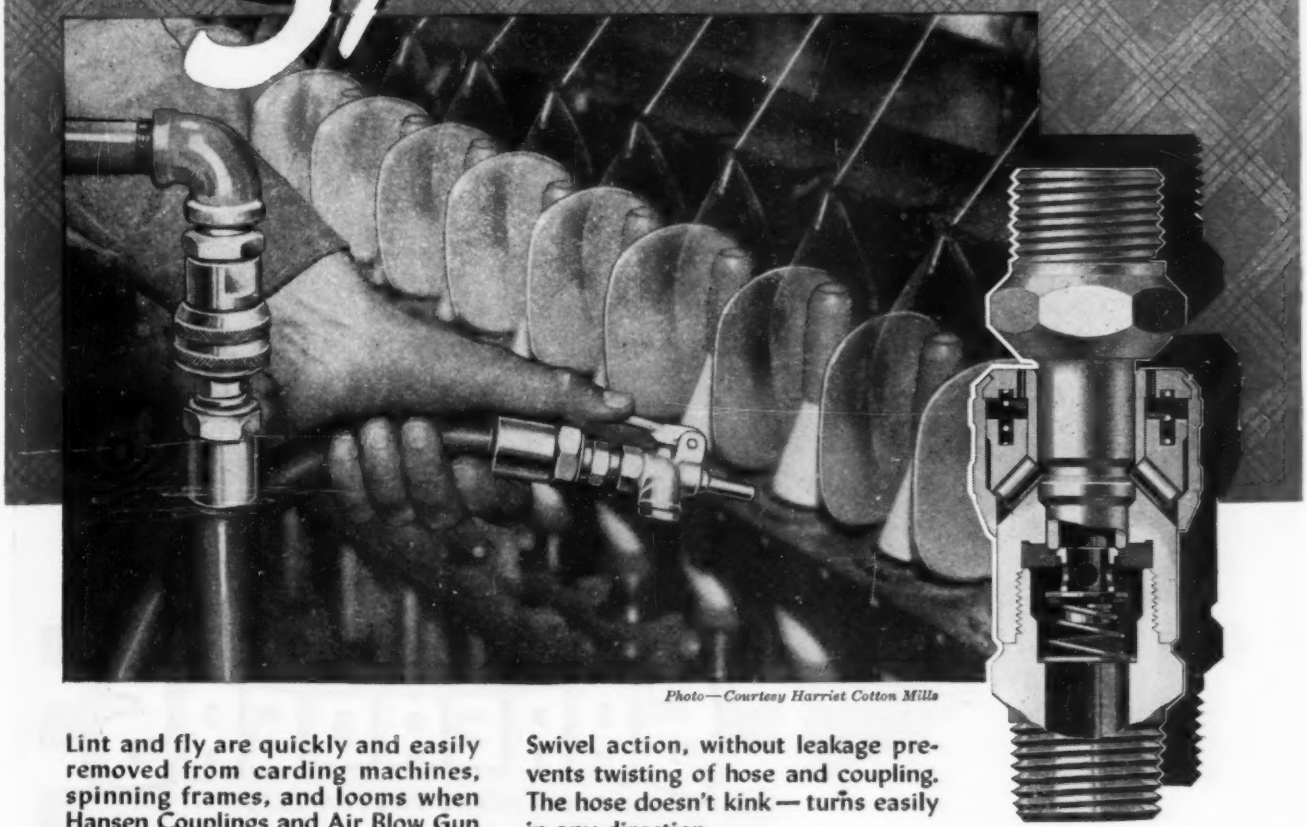
Dayton Rubber

HANSEN COUPLINGS Speed Up LINT REMOVAL



Photo—Courtesy Harriet Cotton Mills

Lint and fly are quickly and easily removed from carding machines, spinning frames, and looms when Hansen Couplings and Air Blow Gun are used.

Simply push the hose end plug into the Hansen socket on the air line... air pressure is immediately available at the blow gun. Quickly disconnected, with automatic shut-off, by a touch of the hand.

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Use shorter hose lengths, which are much easier to handle, because connecting and disconnecting is so quick and easy.

Made in sizes to fit your present hose and air line. Sizes recommended for new installations: ½ inch pipe line; ½ inch I. D., 1 inch O. D. hose. For a new installation in this size, parts and part numbers are shown below.

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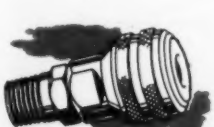
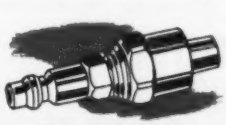
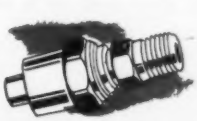


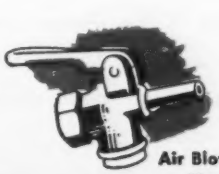
Socket
No. 5300



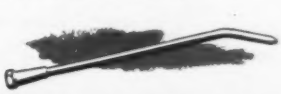
Hose Clamp Plug
No. 5-PP19



Hose Clamp
No. HC-2P19



Air Blow Gun
No. 25



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Orange—Gaillier d'impression, par Rossetti, 1764; tapisserie peinte au rolle.
Courtesy Columbia University Library

Manufacture of the printed fabric or *toile imprimee* was depicted on a series of panels by Joseph Gabriel-Marie Rossetti, designer at Orange, France, in 1764. The tapestry above shows proprietors and workers in the print shop.

Cloth was stretched on a table and a "block", or wood engraving covered with color, applied to it. When a number of shades were desired, additional colors were painted on with fine brushes.

By 1782, the copper-plate printing press was introduced, permitting designs of greater variety and perfection.

In the modern process of printing, as in those of dyeing and finishing, rapid and dependable de-sizing is accomplished with

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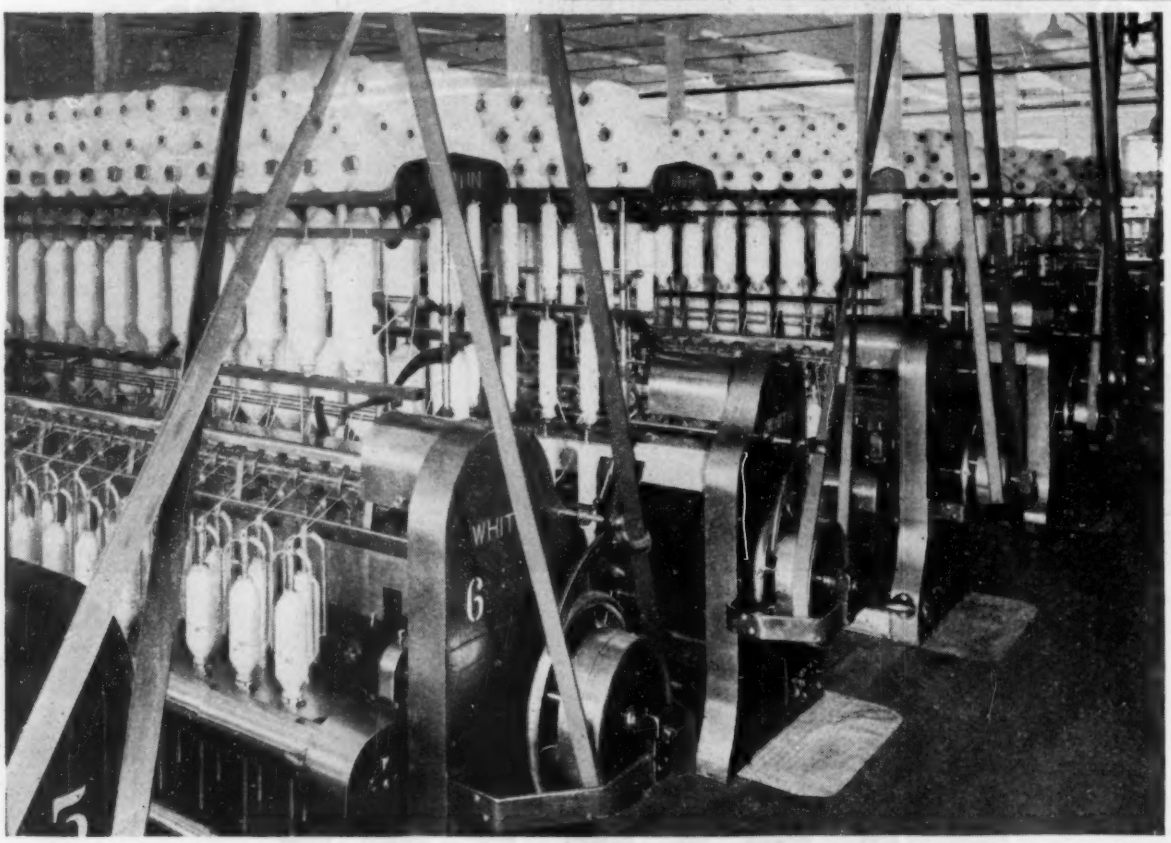
Built for long reliable performance, Tannate has high power transmitting capacity, assures maximum machine speeds even under varying load conditions. Tannate is flexible, runs easily over small pulleys with short centers and high pulley ratios. Tannate is stronger, too; has an average strength 1/3 to 1/2 higher than most first-quality oak belting. Resists heat, water, machine oils and many chemicals.

Use Tannate to increase output, lower costs; experience has proved it pays to *belt your drives with Tannate.*



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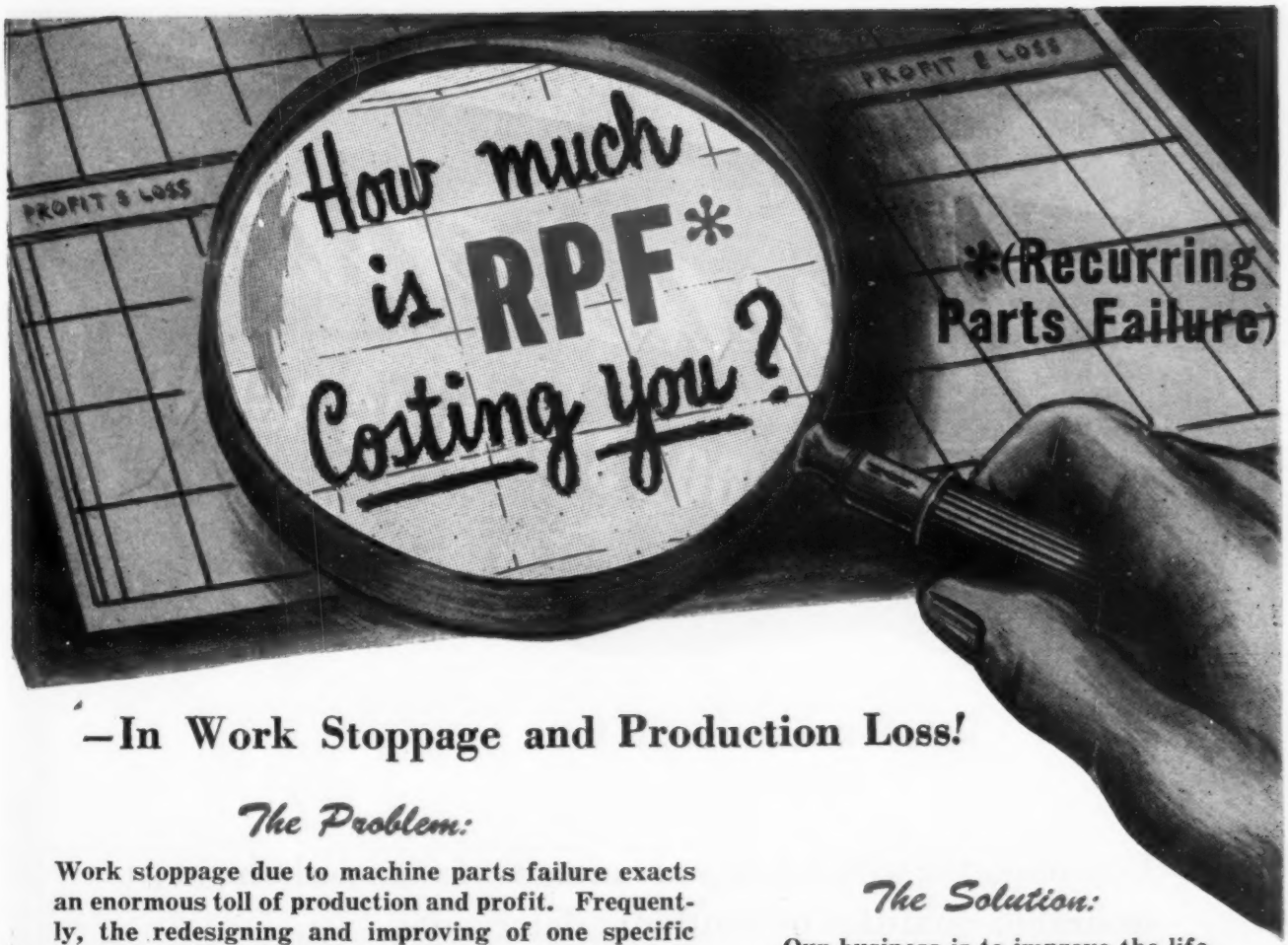
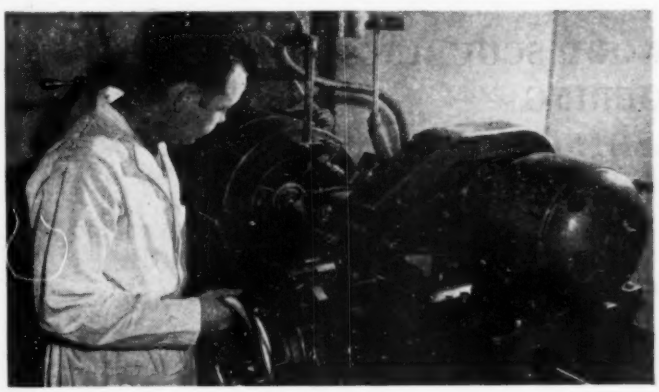


—In Work Stoppage and Production Loss!

The Problem:

Work stoppage due to machine parts failure exacts an enormous toll of production and profit. Frequently, the redesigning and improving of one specific "sore spot" part would eliminate a majority of the average machine breakdowns. Under today's costs, no possibility should be overlooked to prevent or reduce Recurring Parts Failure.



One of the Nations Finest!

Bouligny now offers specialized engineering and equipment for producing longer lasting machine parts that require heat treating of steels, precision grinding, machining and electro-plating. Above is one of our modern machines for precision internal grinding.

The Solution:

Our business is to improve the life and wear, when feasible, of ordinary "weak spot" machine parts. Fresh from exacting war aircraft production, our engineers and modern metal working equipment have been successful "trouble shooters" for a number of manufacturers. If you have Recurring Parts Failures, we'll be glad to talk with you—without obligation.

●

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Manufacturing Division

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The wear-resisting cover is spliced with Manhattan's patented Extensible-Tip. No separation takes place. Atmospheric conditions cannot penetrate to cause stretch or shrinkage. These features are important where accuracy in speed and power are necessary to good machine performance.

Condor Whipcord Endless Belts combine high tensile strength, optimum flexibility and accuracy of manufacture. You "Save on the Long Run" that these belts give you. Ask for Bulletin 6869-C.

Manhattan's complete line of rubber products for the Textile Industry is consistently dependable — outstanding in quality. Make MANHATTAN your choice.

("Flexlastics" is exclusive with Manhattan)

RAYBESTOS R M MANHATTAN

RAYBESTOS-MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION **PASSAIC, NEW JERSEY**

SMITH-DRUM...

....OFFERS THE ONL

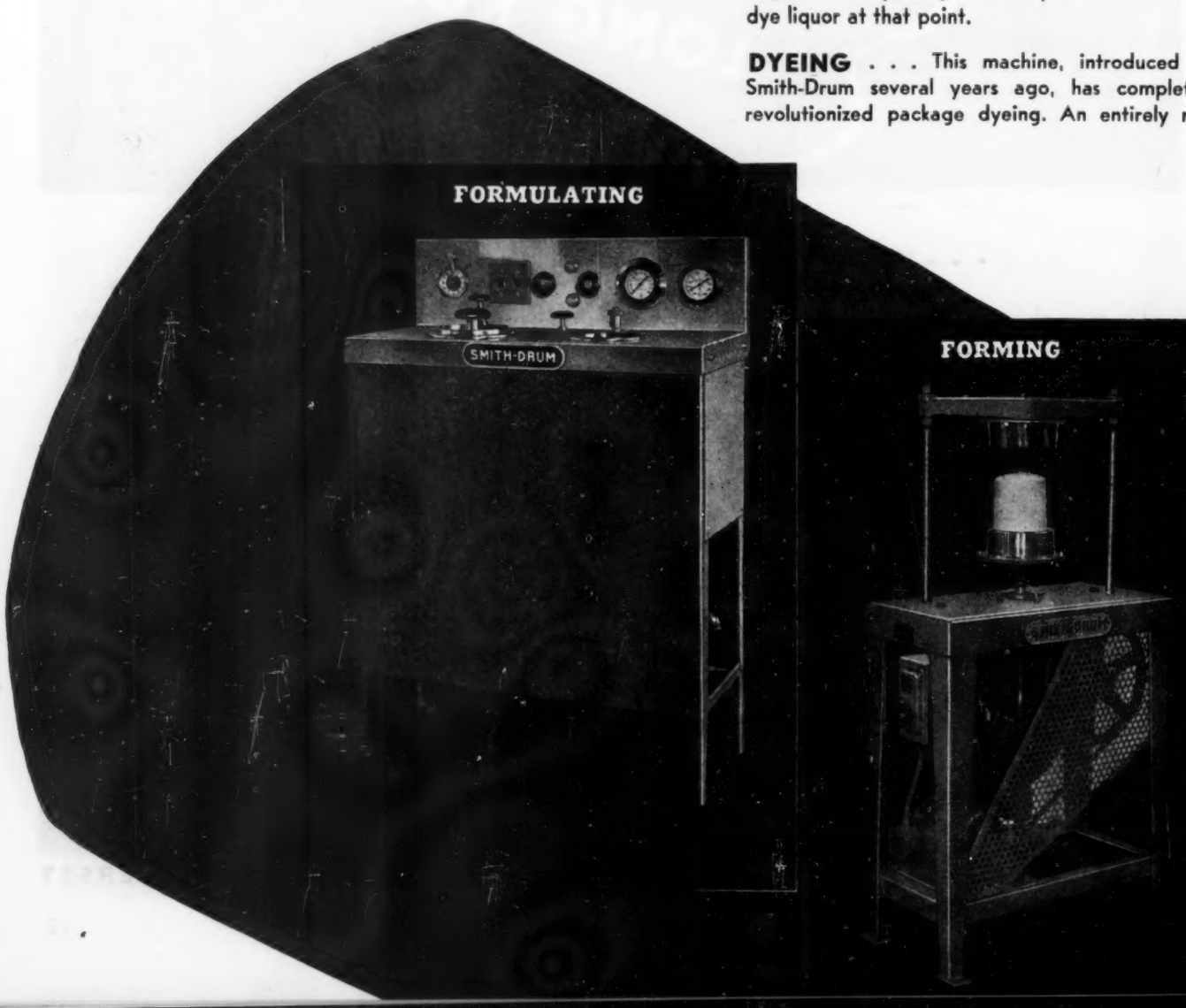
SPECIFICALLY DESIGNED TO HANDLE YA

Here, FOR THE FIRST TIME, is a completely integrated system especially designed for preparing, dyeing extracting and drying yarn in package form. Each machine is the result of extensive research and experimentation to develop the best design for the specific purpose of handling packages . . . to eliminate the disadvantages of other types of machines and to provide many new advantages. This system results in faster, more uniform work . . . cuts costs . . . reduces labor

FORMULATING . . . This machine dyes a single package and is designed for laboratory use in determining the approximate formula to be used in the larger batch machine. It provides more accurate control of the formula, because the sample is dyed under exactly the same conditions as the complete batch.

FORMING . . . This machine properly prepares the package for dyeing by crimping the edges of the package to aid penetration of the dye liquor at that point.

DYEING . . . This machine, introduced by Smith-Drum several years ago, has completely revolutionized package dyeing. An entirely new



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Complete System

YARN IN PACKAGE FORM

type of package carrier and a radical departure in spindle design reduce resistance to flow, providing much greater flow of liquor through each package than the conventional types of machines. This greatly increases the speed of dyeing and improves uniformity of results.

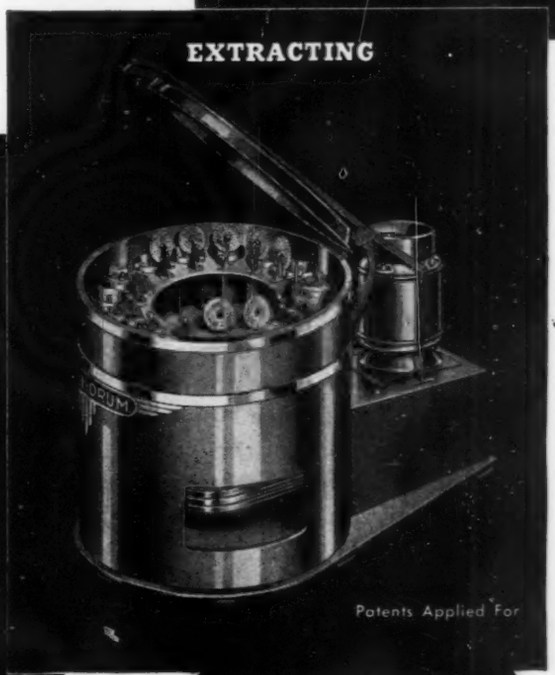
EXTRACTING . . . This brand-new Smith-Drum machine extracts packages in 70 seconds running time. The degree of extraction is equal to a high-speed 48" conventional extractor. This means a big saving in both steam and electricity in the drying process. It also reduces labor costs by simplifying loading and unloading so that even a girl can operate it. Complete cycle, including loading and unloading, is only 2 minutes. Production is approximately 300 to 350 packages per hour. The machine also reshapes the package and prevents crushing of dye tubes.

DRYING . . . Another new Smith-Drum development, employing a new principle in package drying. Cuts drying time as much as 75%. It uses less electricity . . . prevents migration of color . . . eliminates salt deposits. Yarn is delivered in better condition because of short drying cycle. Drying is more uniform than by other methods.

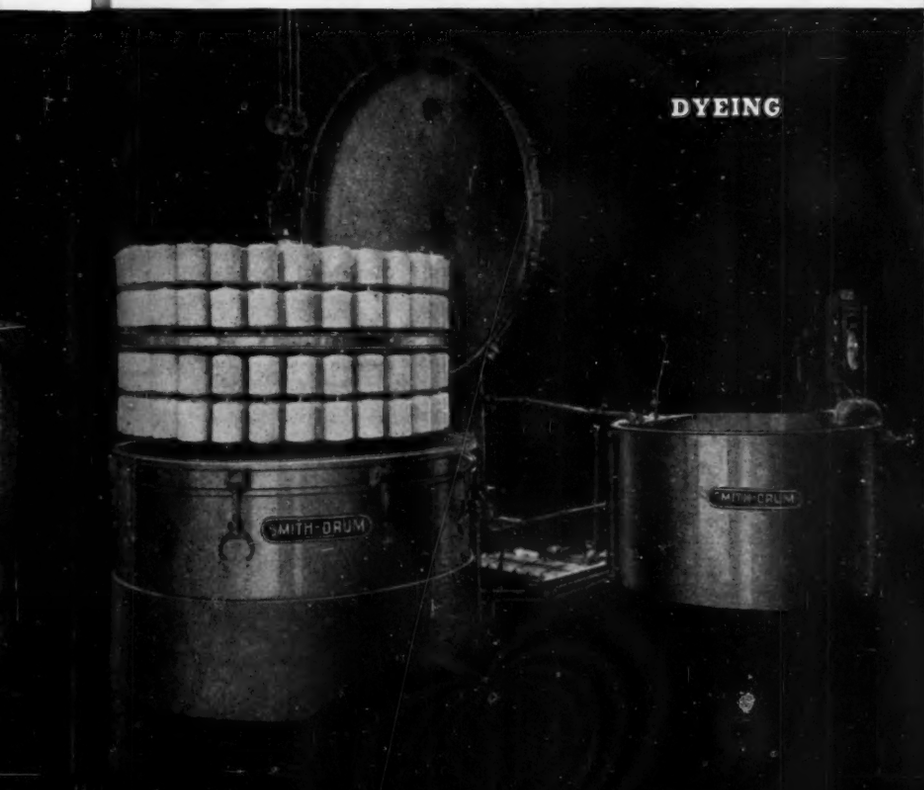
Complete information on any or all of these machines will be sent to you promptly upon request.

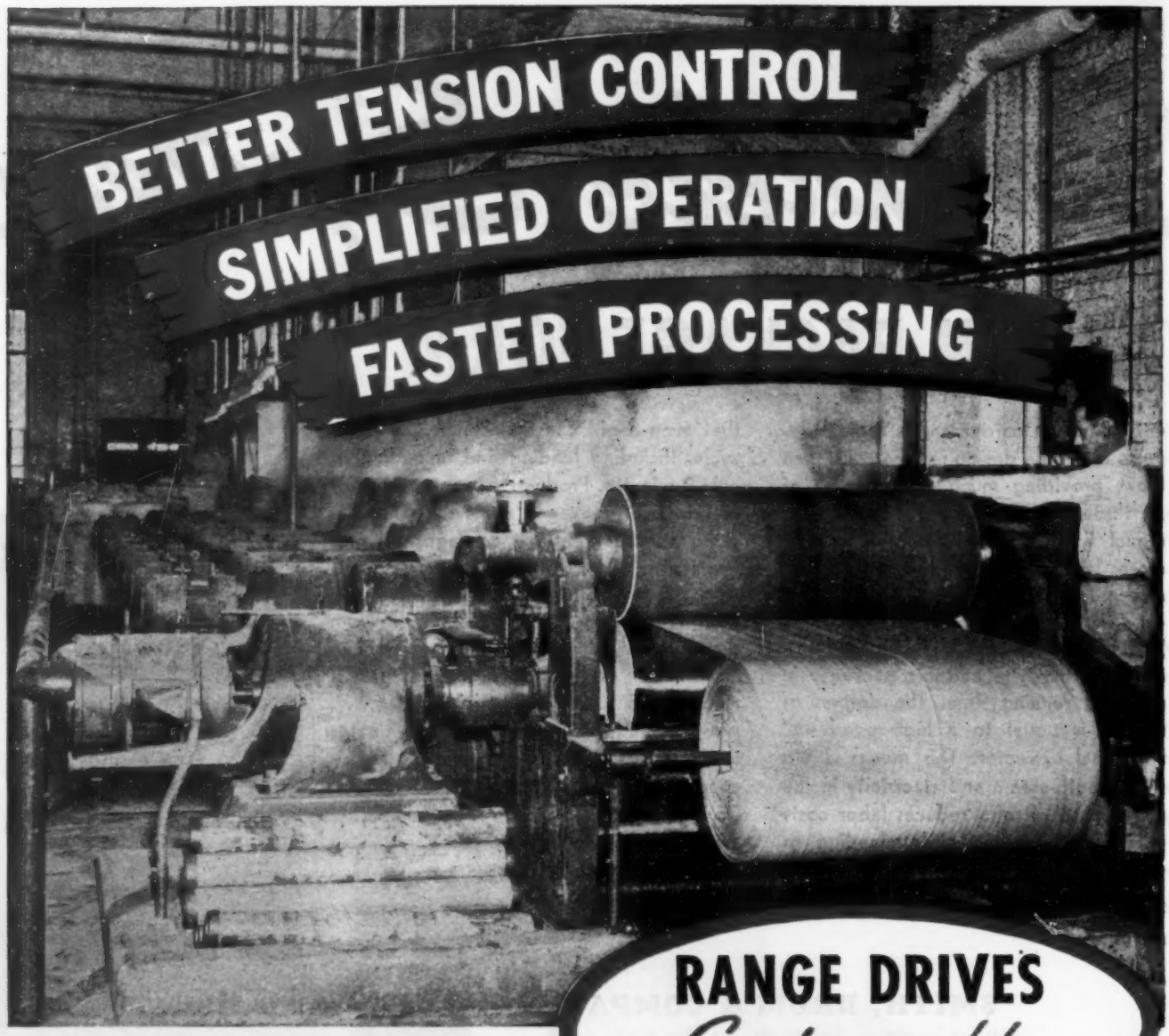
SMITH, DRUM & COMPANY
Allegheny Ave. at 5th St., Philadelphia 33, Pa.

Patents Granted and Pending



Patents Applied For





Eleven Reliance A-c. Motors operate this progressive boil-off range. Totally enclosed and fan-cooled, these rugged motors have special dye house insulation on windings as protection from caustic fumes.

RANGE DRIVES *Engineered by* RELIANCE

Whatever the specific operation involved, you will find the range drive planned by Reliance engineers offers important advantages. Better tension control and simplified operation result in faster, lower-cost processing. And your sturdy, protected Reliance Motors can be depended on for a long life of service with far less maintenance. There are motors and motor drives by Reliance for every need in industry. Consult a Reliance Engineer.

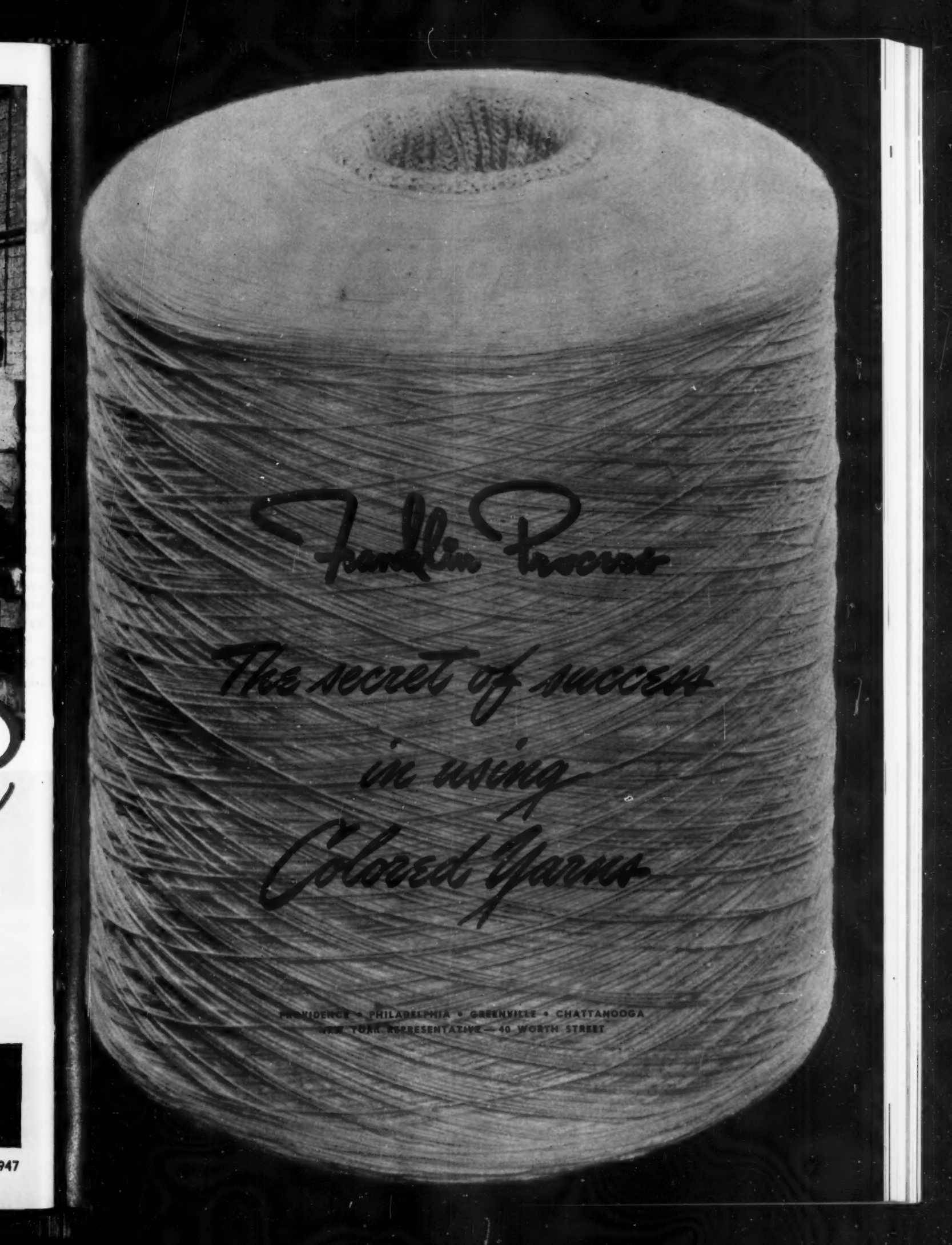
RELIANCE ELECTRIC & ENGINEERING CO.

1085 Ivanhoe Road **Cleveland 10, Ohio**

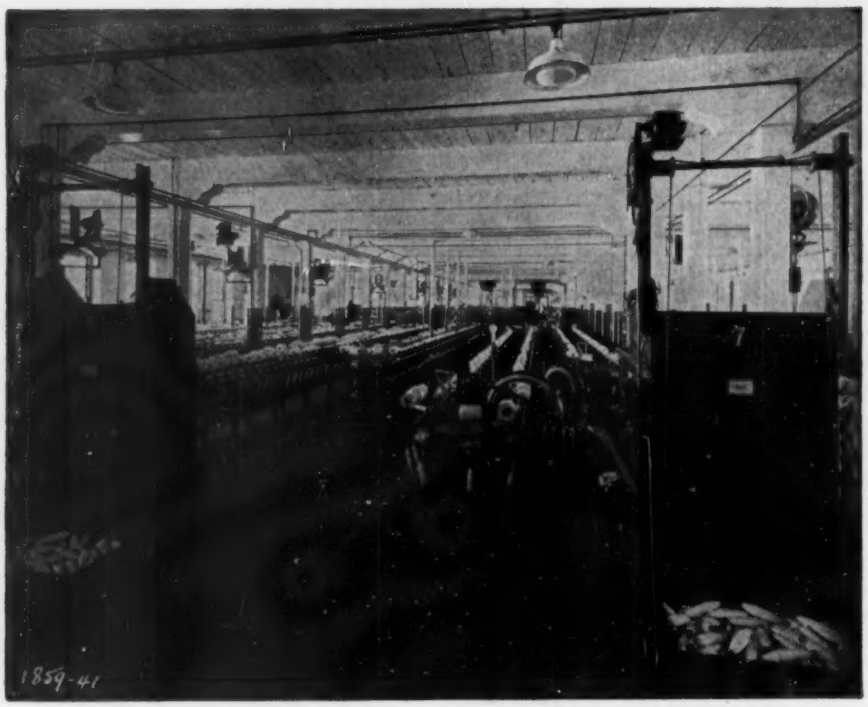
Appleton, Wis. • Birmingham • Boston • Buffalo • Chicago • Cincinnati
Dallas • Denver • Detroit • Gary • Grand Rapids • Greenville, S. C.
Houston • Kansas City • Knoxville • Los Angeles • Milwaukee • Minneapolis
New Orleans • New York • Philadelphia • Pittsburgh • Portland, Ore.
Roanoke, Va. • Rockford • St. Louis • San Francisco • Seattle • Syracuse
Tampa • Tulsa • Washington, D. C. • Sao Paulo, Brazil

RELIANCE A-C D-C MOTORS

"Motor-Drive is More Than Power"


Franklin Process
The secret of success
in using
Colored Yarns
PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA
NEW YORK REPRESENTATIVE — 40 WORTH STREET

ABBOTT AUTOMATIC WINDERS



The operations required to run a cone winder are:

1. **Pick up bobbin**
2. **Find end**
3. **Put bobbin in position**

---

4. **Find end on cone**
5. **Tie ends**
6. **Start winding head**
7. **Hold thread out of traverse until cone is up to speed.**

The Abbott Automatic Winder requires only the first three operations to be done. The last four operations are wholly automatic.

Also, instead of a constant parade around the machine, the operator stays in one position sitting or standing.

Also, the full and empty bobbins and cones are within easy reach in large supply.

The result is a production three times that of the conventional stationary spindle non-automatic winder.

Average hourly production per operator 900 to 1000 bobbins per hour

2 oz. bobbin..... 112 lbs. hour
4 oz. bobbin..... 224 lbs. hour
6 oz. bobbin..... 338 lbs. hour
8 oz. bobbin..... 448 lbs. hour

ABBOTT MACHINE COMPANY

WILTON, N. H.

Southern Representative, L. S. Ligon, Greenville, S. C.

USE RAYCO Fibers!

Just let us know *what* you want—we'll see that you get it *at just the price you want to pay.*

Whatever your requirements in comber noils, card strips, spinners and rovings (machined and unmachined), colored card strips and soiled card, we can meet your *exact* requirements.

We are able to offer you cotton, cotton and rayon blends; cotton, rayon and aralac blends and assorted rayon sweeps

Place your order today and save money!

The RAILWAY SUPPLY & MFG. CO. and Affiliates

Specialists in Grading, Marketing and Processing Cotton and Synthetic Fibers

General Offices: Cincinnati, Ohio

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RAYCO COTTON & SYNTHETIC FIBERS

TEXTILE BANKING COMPANY

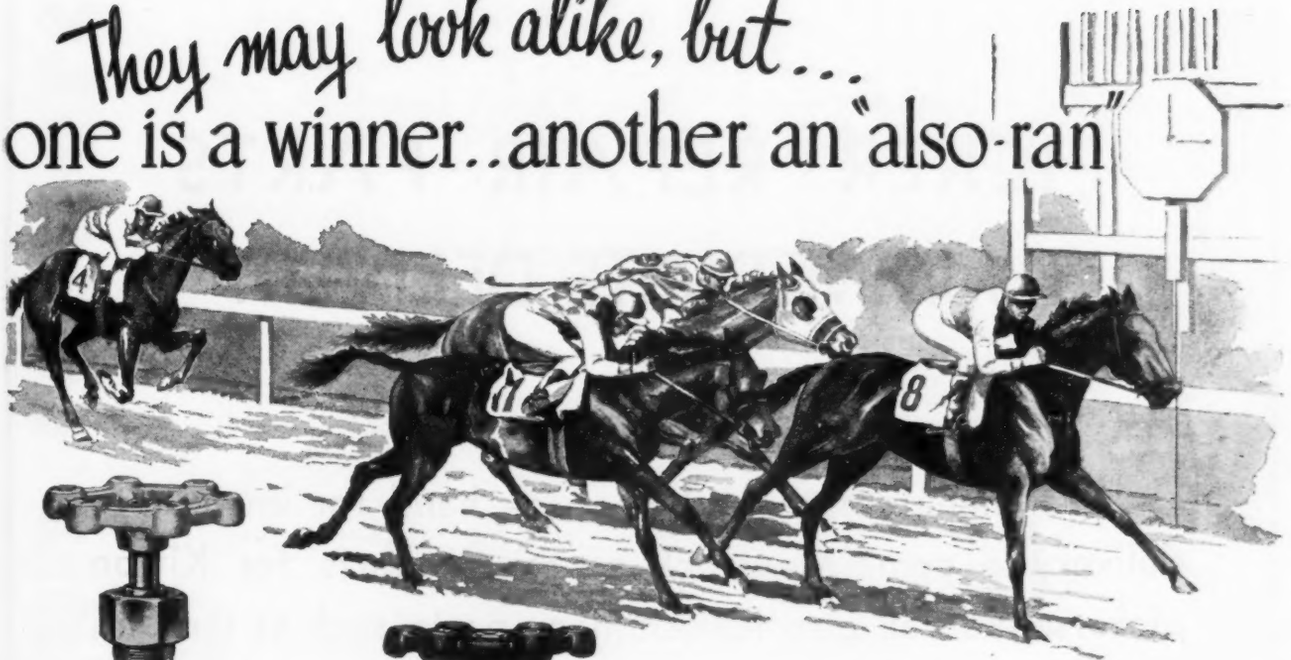
Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

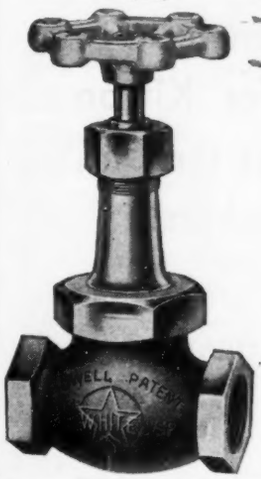
55 MADISON AVENUE • NEW YORK

They may look alike, but...
one is a winner..another an "also-ran"

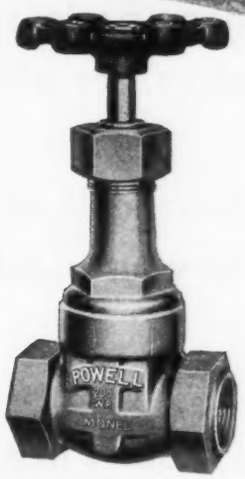


Call it "heart", "staying power", or what you will, some thoroughbreds have what it takes to win.

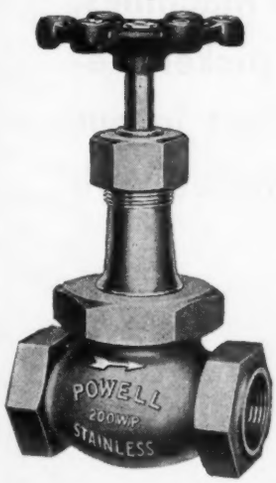
Now let's consider valves!



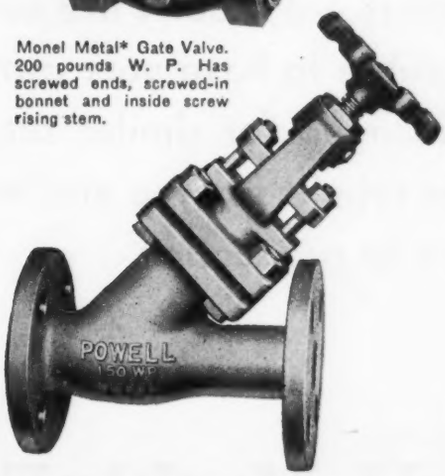
200-pound Bronze Globe Valve. Screwed ends, union bonnet, renewable, specially heat treated stainless steel seat and regrindable, renewable, wear resisting "Powellium" nickel-bronze disc.



Monel Metal* Gate Valve. 200 pounds W. P. Has screwed ends, screwed-in bonnet and inside screw rising stem.



200-pound Stainless Steel Globe Valve with screwed ends and union bonnet.



Pure Nickel O. S. & Y. "Y" Valve. 150 pounds W. P. Has flanged ends and bolted flanged bonnet.

Compare the outward appearance of any Powell valve with that of other valves of the same type and size. You'll probably see very little difference. *It's the things you don't see that give Powell valves the "staying power" that makes them winners.*

There's nothing mysterious about these things. They're merely the result of the continual progress in design, knowledge of materials, and quality of workmanship that comes from more than a century of making valves—and valves only—for American industry.

For the last 25 years, to meet the ever-growing demands of the Chemical and Process Industries, Powell has been building a complete line of Corrosion-Resistant Valves in many special designs and the widest range of pure metals and alloys ever used in making valves.

The Wm. Powell Company
Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

*A registered trade name of the International Nickel Company, Inc.

POWELL VALVES

PICKER REPAIR PARTS
For IMMEDIATE DELIVERY

We manufacture and keep on hand for immediate delivery a complete stock of repair parts for Kitson pickers. We can also furnish many parts, such as screens, ball bearings, aprons, and beaters, for other pickers.

In an emergency, a telephone call or telegram can have the needed repair parts at your plant the day after the order is placed.

Aldrich rebuilt pickers are exactly like new machines, and where it is not feasible to have your own pickers rebuilt, these can be exchanged for similar sections in our warehouse which can be rebuilt for you and installed with little or no interruption to production.

AldricH MachinE

Greenwood, WorkS South Carolina

better STARCH through research

Auxiliary Room to Product Development Laboratory at A. E. Staley Manufacturing Company. Here new Textile Starches are processed, in miniature equipment, for use in laboratory tests.

•

After a new Textile Starch has been created in the Product Development Laboratory or Research Laboratory, it is processed in larger amounts in the Auxiliary Room and thoroughly tested in the Textile Laboratories. The perfected formula for this Starch is sent to the plant where it is then made up in larger amounts for actual mill tests.

Staley Laboratories work constantly to develop new products and improve present products to be of greater service to our customers. Strict Control Laboratory supervision, throughout every step of processing, guarantees uniform quality and consistent, dependable performance of each and every shipment.

Staley's prompt service and complete cooperation is available to you. Write, wire or phone for detailed information.

STALEY STARCHES

Staley's CORN AND SOY BEAN PRODUCTS

ATLANTA • SPARTANBURG
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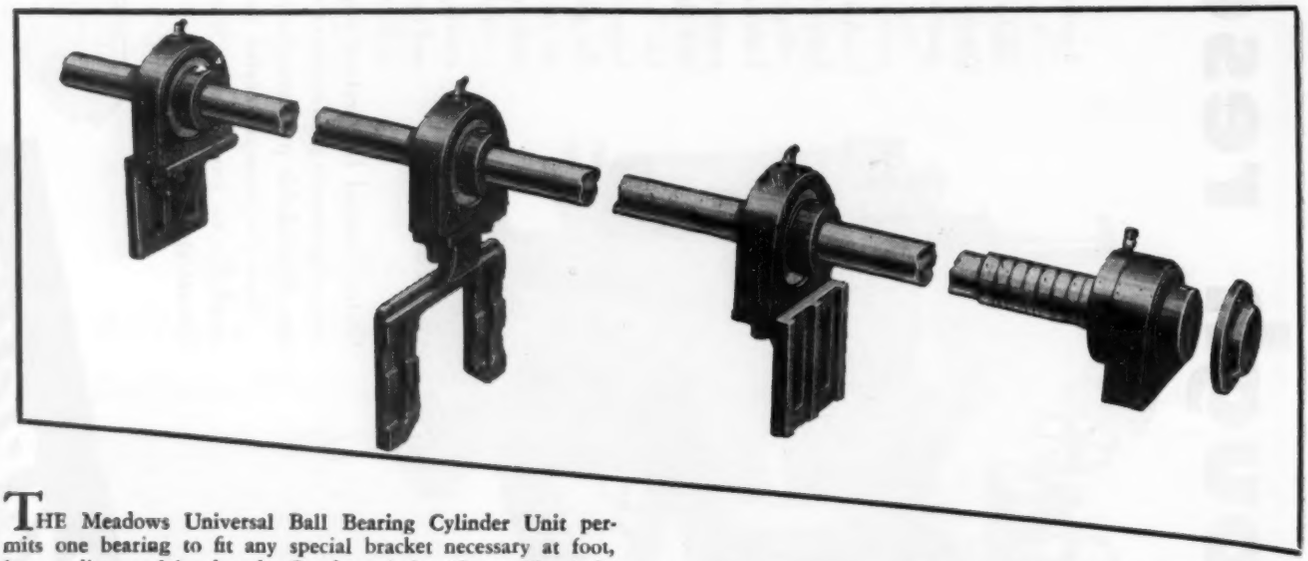
. E. STALEY MFG. COMPANY

DECATUR, ILLINOIS

MEADOWS HEAVY DUTY *Universal* BALL-BEARING CYLINDER UNITS



THE Meadows Universal Ball Bearing Cylinder Unit permits one bearing to fit any special bracket necessary at foot, intermediate and head ends. Quadrant hubs, idler pulley hubs and outboard caps can be used as needed.

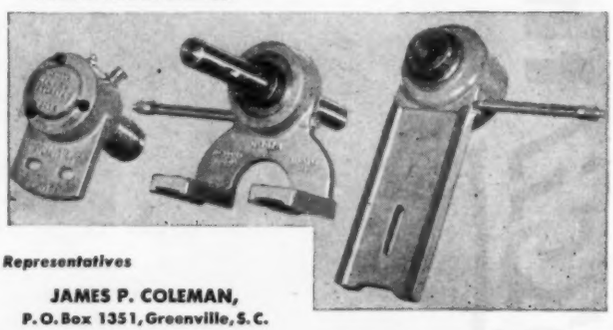
We particularly recommend these Universal Bearings when new oversize journals are installed. At this time all bearings can be standardized to one size for long, trouble-free operation and stock-room simplicity.

- **Fafnir Heavy-duty, self-aligning ball bearings.**
- **Double metal shields on both sides.**
- **Completely interchangeable in various shaft sizes on supporting brackets.**
- **Requires lubrication only once every 5000 hours, or roughly twice a year.**
- **No felt seals for troublesome installations and high initial friction drag.**
- **Brackets for bearings furnished to your requirements.**

We have ample stocks of these bearings and most housings for prompt shipment. *Repair and maintenance item.*

We also have in stock ample supplies of SAE 1035 ground and polished +.000 - .001 shafting for journals. We strongly recommend installing these high strength, precision journals when applying ball bearings.

Also standard Fafnir design Ball Bearing Cylinder Units to replace plain bearing units in Whitin, Saco-Lowell, Saco-Pettee, H & B, Lowell & Mason, and Hall-Stell or Prince Smith frames.



Representatives

JAMES P. COLEMAN,
P. O. Box 1351, Greenville, S. C.

WALTER S. COLEMAN,
P. O. Box 722, Salisbury, N. C.

MATTHEWS EQUIPMENT CO.,
93-A Broadway, Providence, R. I.

MEADOWS MANUFACTURING CO. · ATLANTA, GA.

. . . . Ball-Bearing Specialists to the Textile Industry . . . .

The *SIDE* of a V-BELT

is the *ONLY* Part that *Even Touches* the Pulley

Naturally, it *GETS* the *WEAR!*

Diagram of V-Belt in Sheave Groove

The moment you look at a V-belt in its sheave, you see that the *sides* are the only part that ever *touch* the pulley. The *sides* do all the *gripping*—they get *all the wear* against the sheave groove wall. The sides *pick up* the load. They transmit that load to the belt as a whole. And then, once more, the sides—and the sides alone—take hold of the driven pulley and deliver the power to it.

No wonder you have always noticed that the sidewall of the *ordinary* V-Belt is the part that *wears out first.*

Now See How the *Patented* CONCAVE SIDE

**REDUCES* Sidewall Wear— *Lengthens Belt Life!*

Clearly, since the sidewall is the part that wears out first, anything that prolongs the life of the sidewall will lengthen the life of the belt. The simple diagrams on the right show exactly why the ordinary, straight-sided V-Belt gets excessive wear along the *middle* of the sides. They show also why the Patented Concave Side greatly reduces sidewall wear in Gates Vulco Ropes. That is the simple reason why your Gates Vulco Ropes are giving you so much longer service than any straight-sided V-Belts can possibly give.

***More Important NOW**
That Gates SUPER V-Belts are Available

Now that Gates *SPECIALIZED* Research has resulted in Super V-Belts capable of carrying much heavier loads—up to 40% *higher horse-power ratings* in some cases—the sidewall of the belt is called upon to do even *more work* in transmitting these heavier loads to the pulley. Naturally, with heavier loading on the sidewall, the life-prolonging Concave Side is more important NOW than ever before!

THE GATES RUBBER COMPANY
DENVER, U. S. A.
"World's Largest Maker of V-Belts"

The CONCAVE SIDE Is a GATES PATENT

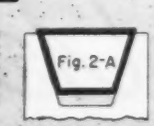
Straight Sided V-Belt

How Straight Sided V-Belt Bulges When Bending Around Its Pulley

You can actually feel the bulging of a straight-sided V-Belt by holding the sides between your finger and thumb and then bending the belt. Naturally, this bulging produces excessive wear along the middle of the sidewall as indicated by arrows.

Gates V-Belt with Patented Concave Sidewall

Showing How Concave Side of Gates V-Belt Straightens to Make Perfect Fit in Sheave Groove When Belt Is Bending Over Pulley.



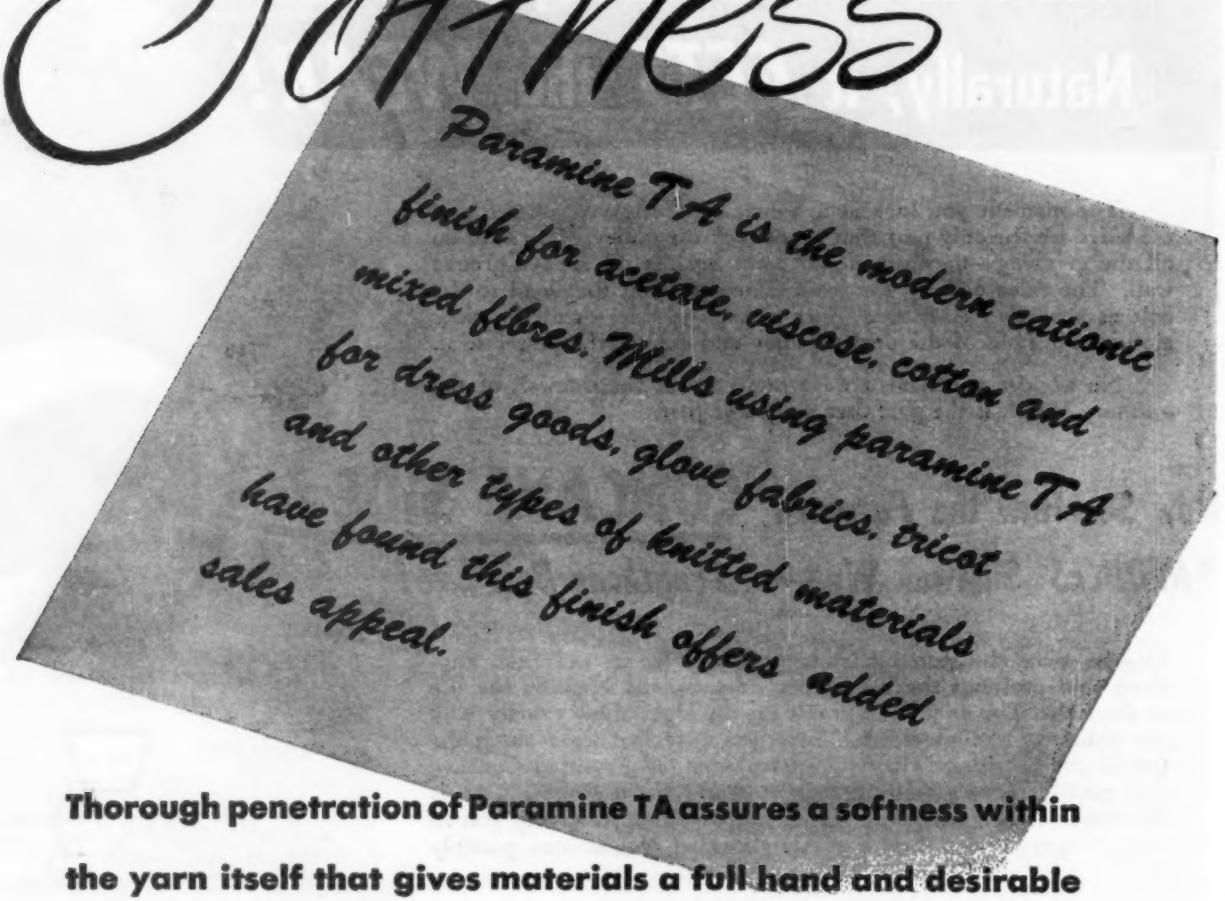
No Bulging against the sides of the sheave groove means that sidewall wear is evenly distributed over the full width of the sidewall—and that means much longer life for the belt.

477

GATES VULCO ROPE DRIVES
Engineering Offices and Jobber Stocks **IN ALL INDUSTRIAL CENTERS** of the U. S. and 71 Foreign Countries
Gates — THE MARK OF SPECIALIZED RESEARCH

IF YOU WANT

DURABLE *Softness*


Paramine T A is the modern cationic
finish for acetate, viscose, cotton and
mixed fibres. Mills using paramine T A
for dress goods, glove fabrics, tricot
and other types of knitted materials
have found this finish offers added
sales appeal.

Thorough penetration of Paramine TA assures a softness within the yarn itself that gives materials a full hand and desirable drape—its substantive action produces a durable, lasting finish —Application is simple.

Use Paramine TA

*Reg. U. S. Pat. Off.

WRITE FOR DETAILS OR DEMONSTRATION

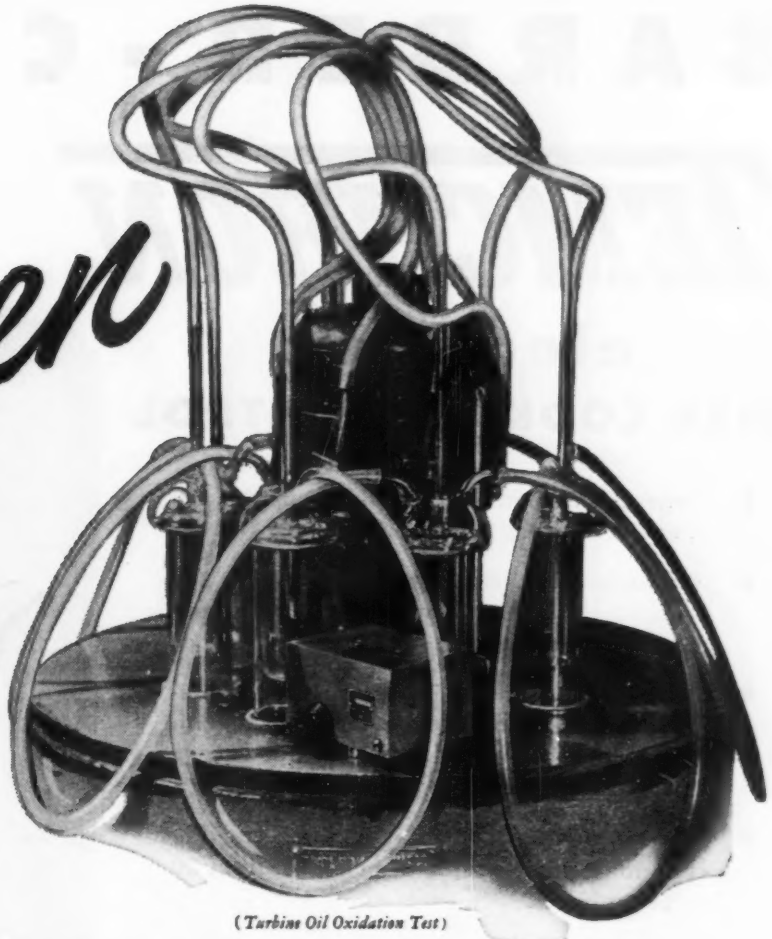
Arkansas Co. INC.

Manufacturers of Industrial Chemicals for Over 40 Years

NEWARK, NEW JERSEY

Oxygen

...FRIEND OR FOE?



(Turbine Oil Oxidation Test)

Without oxygen, man cannot live. Yet, reaction to oxygen may shorten the service life and destroy the value of a lubricant!

Sinclair is ever alert to the importance of knowing exactly how oils will resist oxidation which can form gums and sludge detrimental to equipment performance.

No satisfactory, quick, short time oxidation test methods have yet been developed. Sinclair Research does not compromise. Some studies require continuous tests of 1000 hours. Others, performed with the apparatus above, are run for 100 hours or more.

This test — to assure consumers that breakdown and resultant costly repairs due to oxidation will be at a minimum — constitutes one safeguard against inferior product performance . . . just as all Sinclair Research is your assurance that every Sinclair Industrial Lubricant is the very highest in quality.

Sinclair Textile Oils

LILY WHITE OILS

In grades to suit all spindle speeds, loads and operating conditions

Light color, long life

SINCLAIR REFINING COMPANY • 630 FIFTH AVENUE, NEW YORK 20, N. Y.

SINCLAIR

Lubricants for Industry

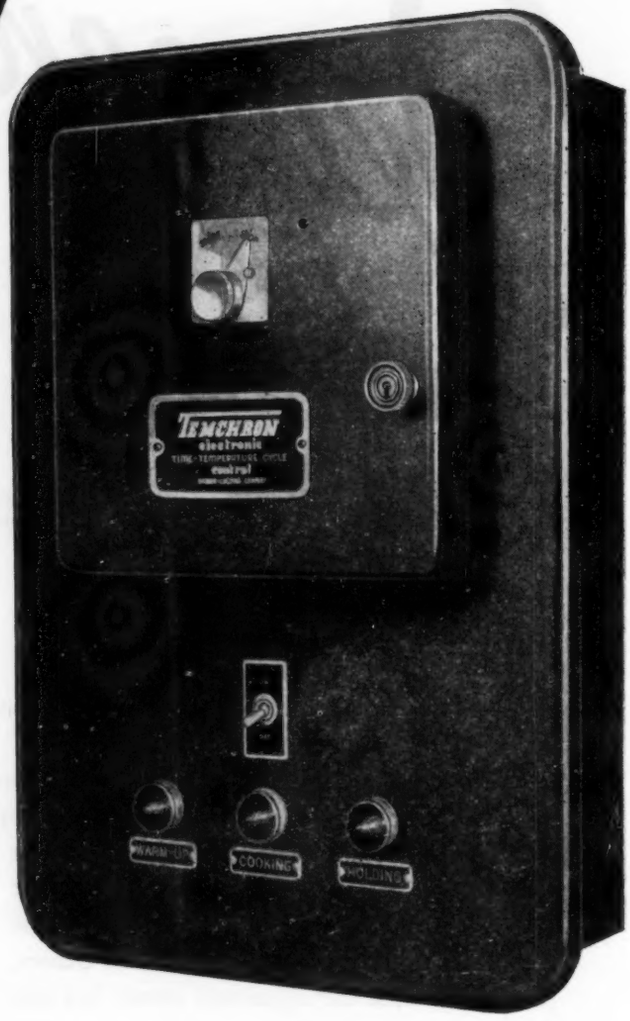
FINEST CRUDES + EXPERT RESEARCH and MANUFACTURING CONTROL = OUTSTANDING PERFORMANCE

BARBER-COLMAN

TEMCHRON

electronic

SIZE COOKING CONTROL

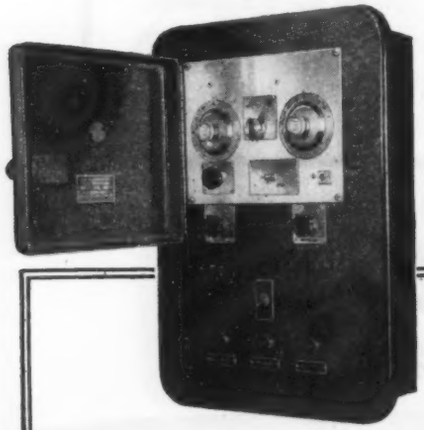


- *Electronically* controls the cooking temperature at any point from 100°F to 210°F.
- *Automatically* governs the length of time for bringing the cold size mixture up to cooking temperature—adjustable from 15 to 90 minutes.
- *Electronically* sets and maintains the temperature at which the cooked size will be held until it is removed from the kettle — within a range of 100°F to 210°F.
- *Automatically* times the length of the cooking cycle for a predeterminable period of from 20 to 180 minutes.

LIGHTS INDICATE...

- When the size mixture is being raised to cooking temperature.
- When the size is cooking.
- When the cooking is completed and the mixture is at the desired holding temperature.

SIZE COOKING CONTROL



TEMCHRON, the only *completely electronic* time-temperature cycle controller, provides hitherto unattainable accuracy, flexibility, and reliability. Identical cycling is assured from batch to batch, for any dial settings, yet simple adjustments permit cycle changes as required by different size formulas. Changes in any part of the cycle — warm-up time, cooking temperature, cooking time, or holding temperature — can be made *by simply resetting calibrated dials.* Write today for Bulletin F-3054 describing details and applications of TEMCHRON, *another Unit of Complete Slasher Control by Barber-Colman.*

Barber-Colman Company

45 YEARS EXPERIENCE SERVING TEXTILE MILLS

ROCKFORD ILLINOIS — BOSTON MASSACHUSETTS — GREENVILLE SOUTH CAROLINA — GREENSBORO NORTH CAROLINA — ATLANTA GEORGIA

CUT YOUR PROCESSING COSTS

WITH Cyanamid SULPHONATED OILS

A Wide Range of Superior Oils

is becoming more generally available as Cyanamid's channels of raw material supply continue to open up.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE . . .
AQUASOL* Sulphonated Castor Oils, NO-ODOROL* Finishing Oils, DECERESOL* OT Wetting Agents, Penetrants, Softeners, Finishes, Sizing Compounds, PARAMUL** 115 Water Repellent, and other specialties and Heavy Chemicals.

For low-cost chemical equivalent of distilled H_2O... FILT-R-STIL* Demineralizing Units.

**Trade-mark *Reg. U. S. Pat. Off.

Yes! Cyanamid sulphonated oils will help you cut right through one of your most pressing problems. For when you use Cyanamid sulphonated oils, you put increased efficiency and dependable performance to work *cutting your costs* by improving your processing. For the absolute uniformity and high quality of Cyanamid oils—made possible through large-scale production methods—eliminate costly guesswork and help achieve excellent results every time.

Industrial Chemicals Division

AMERICAN CYANAMID COMPANY

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

How to Gain and Maintain a
Delicate Balance
When a Loom-Clutch
Operates this easily...
...Here's what it means to you—
THIS SMOOTH
"Brake-Action"
Acts to Prevent
Yarn-Breakage and Binder-Chatter
Look through the Eye of
C&K's High-Speed Camera
...and see a Bobbin Transferred in 1/20th of a Second!
Crompton & Knowles Loom Works

MANY STUDIES . . .

One Objective . . .

to give you Finer Fabric at Lower Cost, from every New C&K Loom

▶How to increase shuttle-speeds, yet at the same time handle shuttle-velocity which *now* attains 40 mph from a dead stop in 1/30th of a second?

▶On the other hand, how to bring this speeding shuttle to a smooth stop so as to prevent yarn-breakage and binder-chatter?

▶How to select and substitute a full bobbin for an empty one, and complete the transfer in 1/20th of a second?

▶How to gain and maintain a delicate balance in "sideslip" feelers (which should be always positive-acting, yet never sever the yarn)?

▶How to provide "fingertip" clutch-operation, yet reduce adjustments, bang-offs, parts-breakage?

These studies and more have been detailed on these pages during recent months. But these are just a few of the projects in progress in C&K's Engineering Research Laboratories, each project aimed at the end result of *increasing your own weaveroom efficiency and profit*. And to make sure of its value to you, every new idea produced by these studies . . . in method, material, or design . . . must answer yes to the challenge of *at least one* of C&K's "6 Sentries":

1. Does it increase Speed of Loom Operation?
2. Does it increase Ease of Loom Operation?
3. Does it improve Quality of Fabric?
4. Does it decrease Cost of Maintenance?
5. Does it improve Continuity of Operation?
6. Does it improve Appearance and Utility?

And there, we submit, is the *soundest future profit-protection* you can have!

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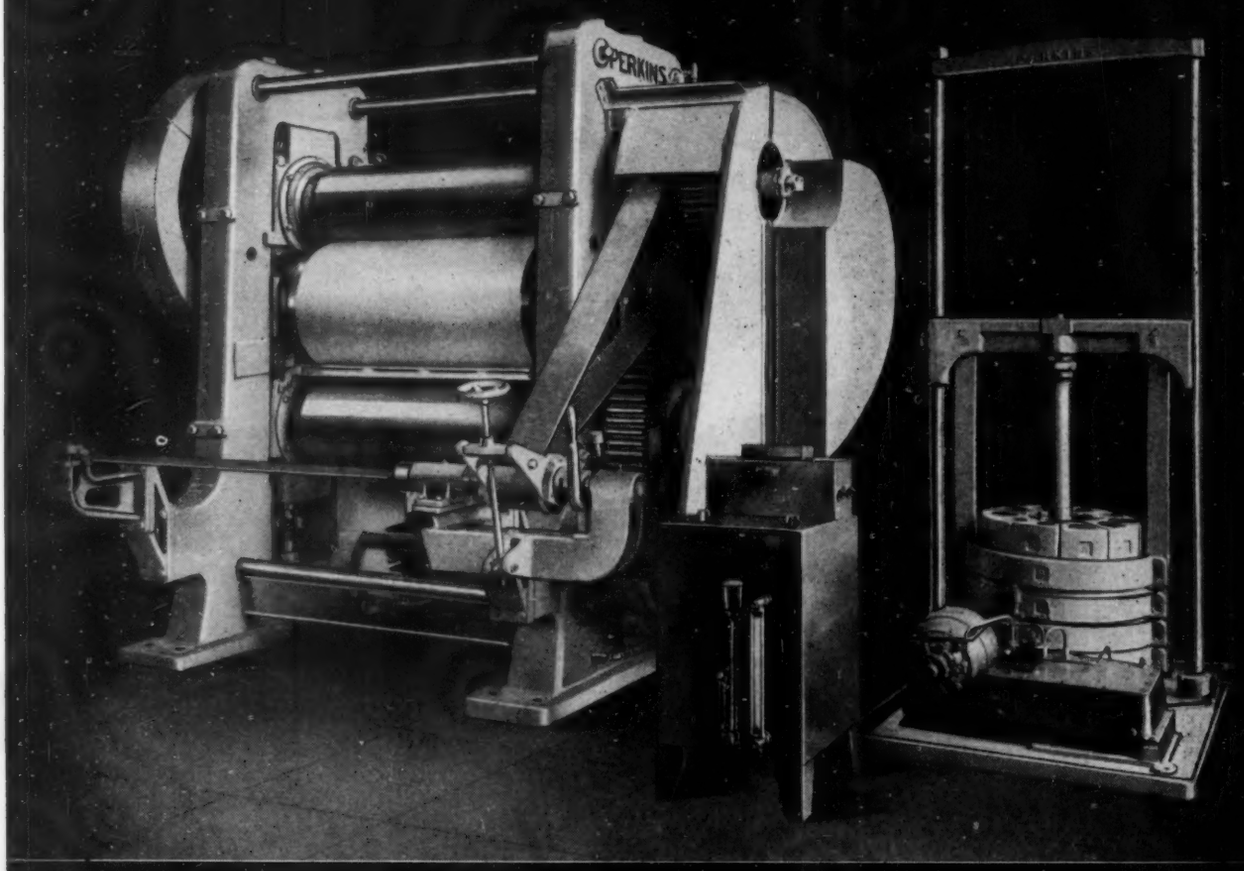

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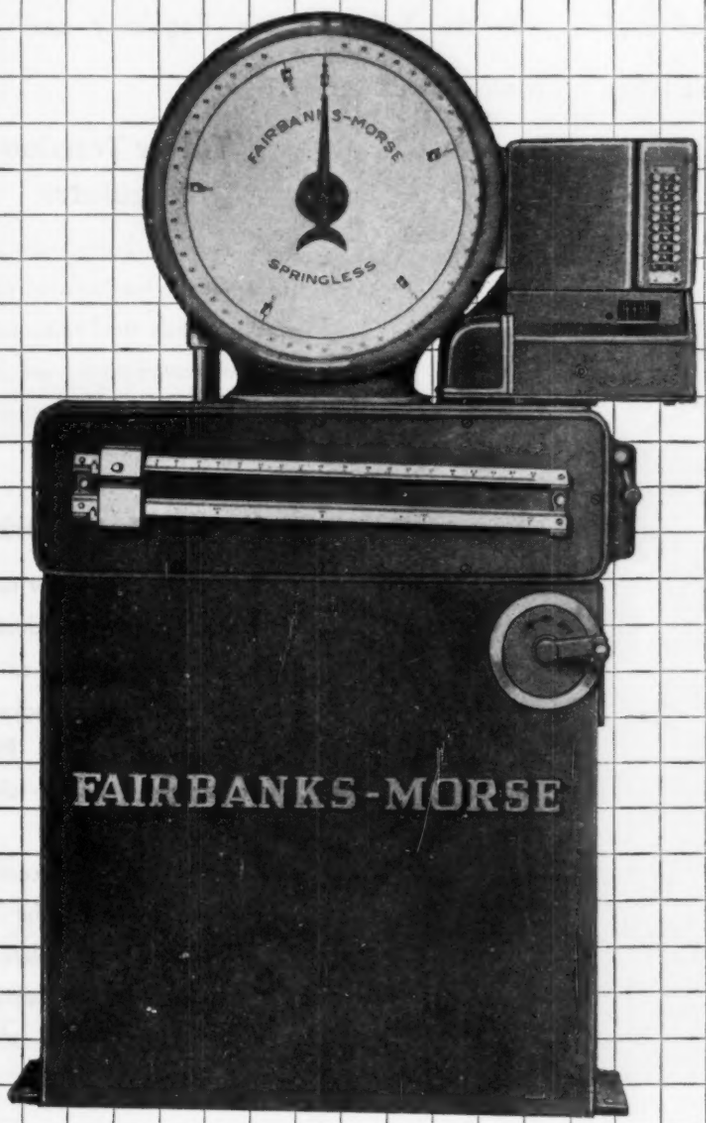

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A rugged, lightweight device for regulating tension when clothing cards. Sturdy steel construction—no complicated parts—weighs only 62 lbs. Frictionless, sealed roller bearings.

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SANDOZ PRESENTS *The color achievement of the month*

Pace Setters BY INTERWOVEN

It's socks like these that have given Interwoven its reputation for keeping out front in the men's fashion race... have made Interwoven the world's largest manufacturer of men's socks.

Since "socks appeal" comes largely from color, Sandoz is proud to be among those suppliers whom Interwoven designers can count upon in creating sales-attracting designs. Sandoz dyestuffs—in addition to providing the perfect dyeing qualities that a mass producer like Interwoven must have—stand up under service, joining with top-quality yarn and artful construction to give the customer the longest possible satisfactory wear.

Sandoz products widely used for half hose are fast-to-washing Azoform and Viscoform colors for cotton and rayon, and the Xylene Milling and Sulfonine colors for wool and nylon. A typical Sandoz specialty is Thiotan RS used with selected dyestuffs for producing white wool and nylon effects in mixed hose or for obtaining more solid results on wool-cotton blends.

For acid, chrome or direct dyes... or auxiliary chemicals... for both natural and synthetic fibres... be guided by the successful "color achievements" you have been seeing in these Sandoz advertisements. Sandoz application laboratories are located in New York, Boston, Charlotte, Philadelphia, Los Angeles and Toronto, where stocks are carried. Branches in Chicago, Paterson and Providence.

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SANDOZ *thinks ahead with textiles*

SANDOZ

THIS IS NO. 64 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

WHERE TO LOCATE THE SUPPLY (Roto-Coner*)

The two important factors in the proper location of the supply on the Roto-Coner* are direction and distance.

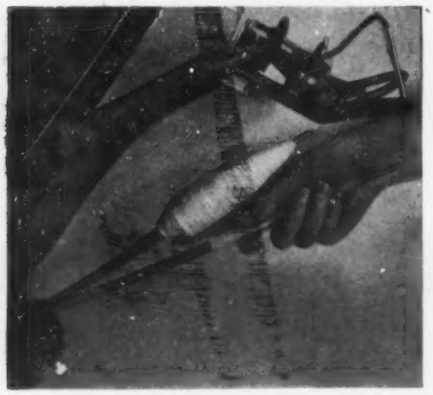

Fig. 1 Tilting Supply Spindle

The axis of the supply — whether bobbin, spool or wound package — should be in line with the delivery point on the tension bracket. With a package supply, it is not too important to be exact, but when fine yarn is being wound from bobbins or cops, this is one of the most important settings on the machine. If excessive end breakage develops on one spindle, the alignment of the supply should be one of the first things checked. All spindles should be examined periodically, which is easily done by sighting along the line of bobbins; if one is out of line, it can be detected at once.

The distance from supply to tension is nearly as important. Experimenting will show the best setting, since sometimes the supply should be as far away as possible, but generally it is set close. A close-set supply runs off smoothly as long as there is a single balloon of the yarn; but when the single balloon changes to double, there is sometimes trouble. A mule cop usually has to be so close to the tension that the full cop cannot be placed on the standard fixed supply spindle. In that case, the tilting supply is used: while the yarn is running, a spring holds the spindle in position close to the tension; while donning and doffing, the spindle is easily tilted forward so that the cop will clear. Once the proper setting is established, all spindles should be set uniformly.

DIFFERENTIAL TENSION AND PRESSURE ADJUSTMENT WITH CREEL SUPPLY (No. 50 Winding Machine)

The Creel Supply is used on the No. 50 when a number of ends are folded in winding a package to be used as a supply for covering wire or rubber.

With the Creel tension, there is no provision for releasing tension as the yarn speed increases in response to the increase in package diameter. With a "dead" yarn or where the increase in diameter is not great, this is not a serious problem, but in all other cases, the lack of tension release will cause the package to bulge badly.

The use of the Two Rod Differential Attachment corrects this condition.

The device consists primarily of three parallel rods. The center rod is fixed in two brackets. The bottom rod, which is free to turn in the same brackets, supports the brackets that hold the top rod. By means of a linkage from the Traverse Frame Counterweight to the bottom rod, the top rod moves outward as the package builds up.

Actually, this attachment serves as another tension, because the contact of the yarn with the rods creates tension. The yarn passes over and behind the top rod, in front of and under the middle rod, and thence to the breakage levers. As the upper rod moves outward, the amount of contact can be reduced from 216° to 23°. Thus a differential tension control is provided.

But tension is not the whole answer. Good winding is the result of a satisfactory combination of tension and pressure. The Two Rod Differential Attachment, while solving the tension problem, makes the standard differential pressure arrangement ineffectual due to the counter pressure effect of the rods.

In order to create differential pressure in keeping with the tension, the arrangement from the No. 6C machine was adapted for use on the No. 50. While the Two Rod Attachment causes the tension to vary inversely with the yarn speed, the 6C Pressure Attachment, working independently, releases the pressure differently. The release is rapid at first, but gradually slows down as the winding progresses. The result is a firm foundation for the package, and the release of pressure prevents the outer layers of yarn from pushing out the inner layers.

Applying the attachment to the machine involves only the drilling and tapping of one hole in the frame. The two attachments are applicable only to machines having fewer than six spindles.

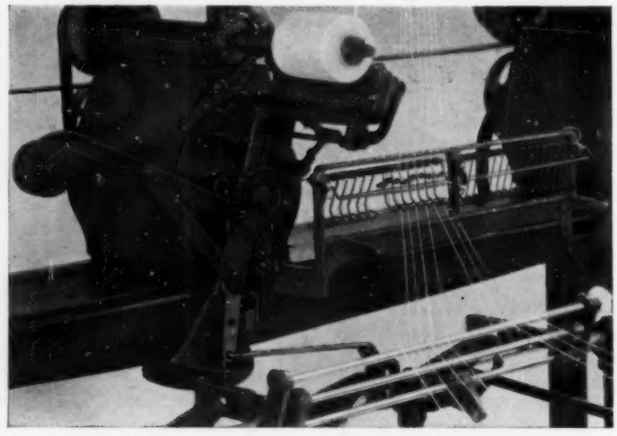

Fig. 2 Heavy Differential Pressure Attachment adapted from No. 6C for No. 50 Machine, and Two Rod Differential Tension Attachment.

*Reg. U. S. Pat. Off. July, 1947

See our Catalog in TEXTILE WORLD YEARBOOK

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THE NEW U S T-eye

IN SHUTTLES FOR EITHER C&K S-6 or DRAPER LOOMS

● BY REDESIGNING the entire eye on automatic loom shuttles, U S offers a notable improvement in threading efficiency. Named the T-Eye (for tension), it features a far superior delivery and trap. The positive trap on the outlet, locking the filling between delivery posts, prevents unthreading from the outside of the eye.

The filling yarn is definitely trapped in the eye on the second pick after transfer. It is also held at the proper position with relation to the thread groove at all times. This means much less filling breakage. Full advantage can be taken of the higher operating speeds of modern automatic looms, and high production of top quality fabrics is assured.

For highest efficiency, you will want the T-Eye Shuttle for C&K S-6 or Draper Automatic Looms you plan to install. A U S representative will be glad to demonstrate all its advanced features.

Designed for top efficiency by U S Shuttle Experts

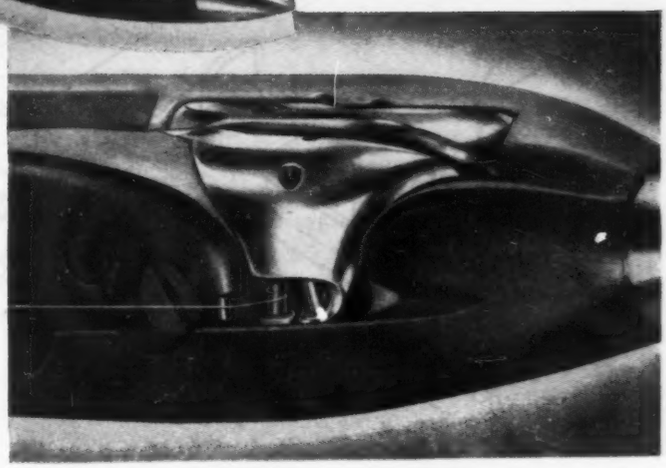
With the outside delivery pins set at an angle, the filling yarn is kept at its proper position with relation to the thread groove. It does not ride at one point,—thus wear on the pins is equally distributed.

The tension pads have been redesigned and made longer and deeper, permitting more uniform tension control.

A newly designed front hook in the eye prevents filling from unthreading from the back.

The eye is set on a strip of live rubber to absorb "rocking" effect in service and prevent loosening in the socket.

Die cast of brass and formed to tolerances of .004" to .005", the eye permits complete interchangeability. When necessary, change-over to a left hand eye for left hand twist can be made in less than five minutes.



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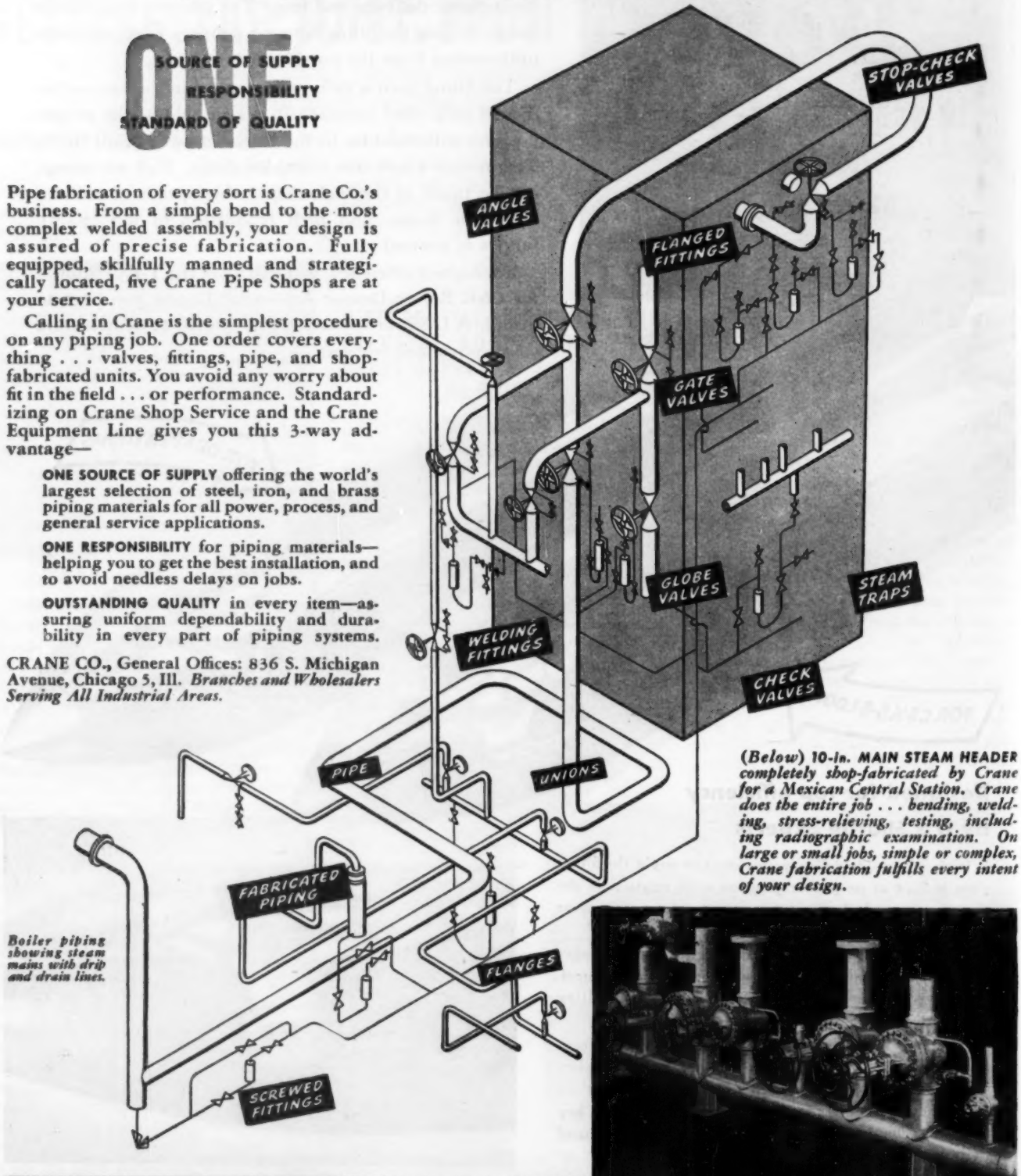
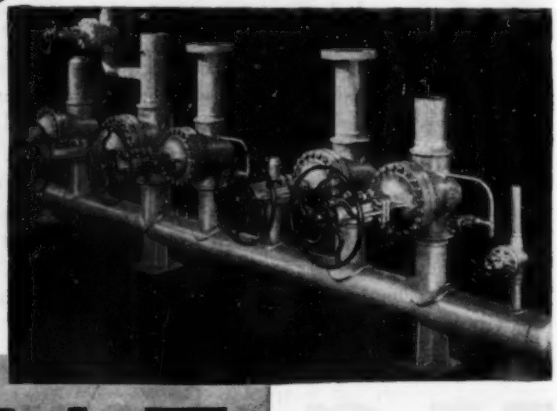


Boiler piping showing steam mains with drip and drain lines.

(Below) **10-in. MAIN STEAM HEADER** *completely shop-fabricated by Crane for a Mexican Central Station. Crane does the entire job . . . bending, welding, stress-relieving, testing, including radiographic examination. On large or small jobs, simple or complex, Crane fabrication fulfills every intent of your design.*



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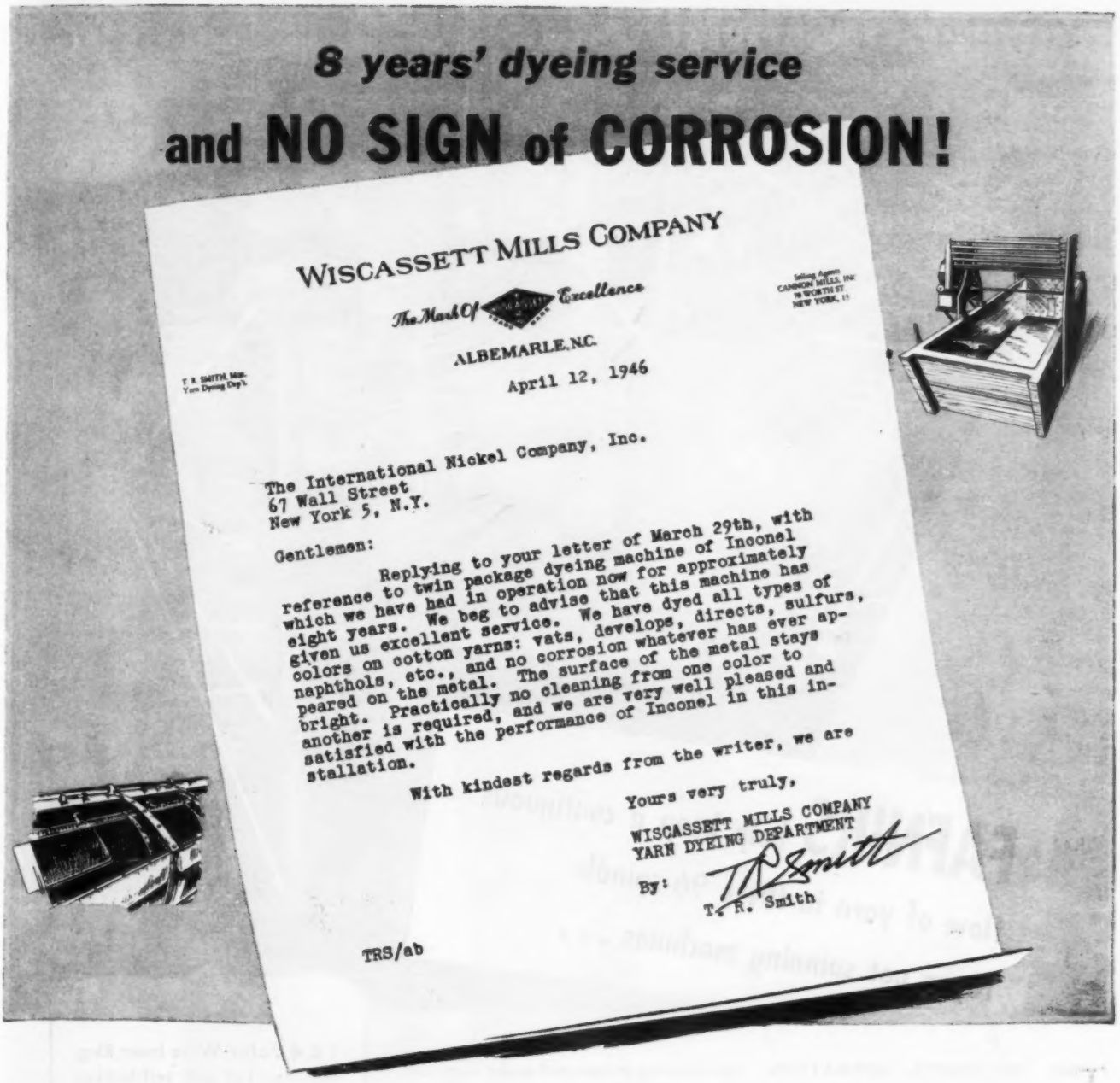

WISCASSETT MILLS COMPANY

The Mark Of Excellence

ALBEMARLE, N.C.

April 12, 1946

The International Nickel Company, Inc.
67 Wall Street
New York 5, N.Y.

Gentlemen:

Replying to your letter of March 29th, with reference to twin package dyeing machine of Inconel which we have had in operation now for approximately eight years. We beg to advise that this machine has given us excellent service. We have dyed all types of colors on cotton yarns: vats, develops, directs, sulfurs, naphthols, etc., and no corrosion whatever has ever appeared on the metal. The surface of the metal stays bright. Practically no cleaning from one color to another is required, and we are very well pleased and satisfied with the performance of Inconel in this installation.

With kindest regards from the writer, we are

Yours very truly,

WISCASSETT MILLS COMPANY
YARN DYEING DEPARTMENT

By: T. R. Smith

T. R. Smith

TRS/ab

EIGHT YEARS AGO, Wiscassett Mills Company, Albemarle, N. C., installed a new twin package dyeing machine. They use it with all types of colors for cotton yarns.

In the letter reproduced above, T. R. Smith, manager of Wiscassett's yarn dyeing department, makes several significant comments. He says, for example, that no corrosion "has ever appeared on the metal. The surface . . . stays bright. Practically no cleaning from one color to another is required."

That's easily understandable. For, when the R. D. Cole Manufacturing Co., Newnan, Ga., built this machine for Wiscassett Mills, they used INCONEL*. This rugged, rustless 80 Nickel-14 Chromium alloy is especially well suited for all dyeing processes. It resists strong alkalies, chlorides and reducing acids; it wards off harmful attack by many oxidizing acids.

Although Inconel exceeds structural steel in both strength and toughness, no special techniques are required for its fabrication and welding. The availability of standard mill forms and castings keeps costs down. Where plate thicknesses are to be 3/16" or greater, Inconel-clad steel answers the purpose—and is more economical.

You'll find further information concerning the advantages and uses of this superior metal for textile dyeing equipment in Technical Bulletin T-7, *Engineering Properties of Inconel*. We'll be glad to mail you a copy upon receipt of your request.

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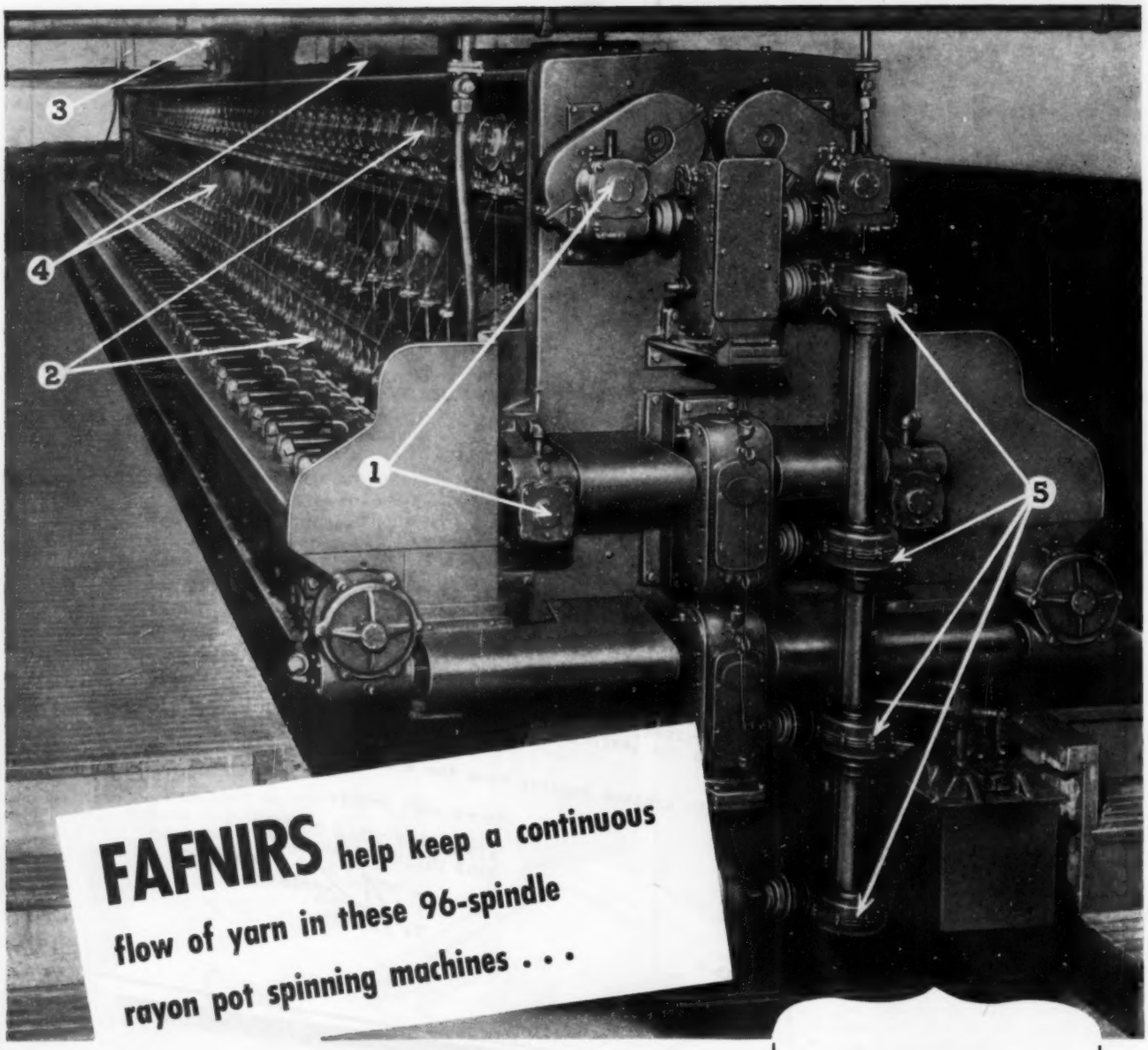
*Reg. U.S. Pat. Off.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall Street, New York 5, N. Y.

INCONEL

(80 NICKEL-14 CHROMIUM)



FAFNIRS help keep a continuous flow of yarn in these 96-spindle rayon pot spinning machines . . .

THE SUCCESSFUL OPERATION of a complex machine like this Butterworth Rayon Pot Spinning Machine depends to a major degree upon the performance of a lot of ball bearings. Thread dimension has to be uniform down the whole line of 96 spindles. Vibration, friction, or lack of concentricity in a shaft or gear, would play havoc with the uniformity of these fragile filaments. The requirements in bearings are further complicated by the corrosive atmosphere of sulphuric acid and water vapors.

The specially designed traverse mechanism gets much of its smooth, vibrationless operation from the use of Fafnir Ball Bearings . . . on shafts, flywheel and gears. Worms and gears of the spinning pumps and godet shafts are supported on Fafnirs . . . and the upper and lower godet drive shafts. These Fafnirs are the famous wide inner ring ball bearings with the double Mechani-Seals . . . the seals that trap lubricant inside a labyrinth of interlocking steel plates and lock out dirt and moisture. The spindle for each godet wheel runs on a pair of Fafnir Plya-Seal Bearings, with the new plastic-impregnated fiber washer, a recent Fafnir development.

Performance such as these Butterworth Machines deliver doesn't just happen. It is the fruit of long cooperation between Fafnir bearing engineers and textile machinery designers.
The Fafnir Bearing Company, New Britain, Conn.

1 & 4 Fafnir Wide Inner Ring Ball Bearing with self-locking collar used on godet drive shafts and traverse drive shafts.

2 Fafnir Plya-Seal Ball Bearings used on spindle for each godet wheel.

3 & 5 Fafnir Radial Ball Bearings used on fly-wheel, gears of traverse drive unit, also on worms and gears of drive shafts for the spinning pumps and godet shafts.

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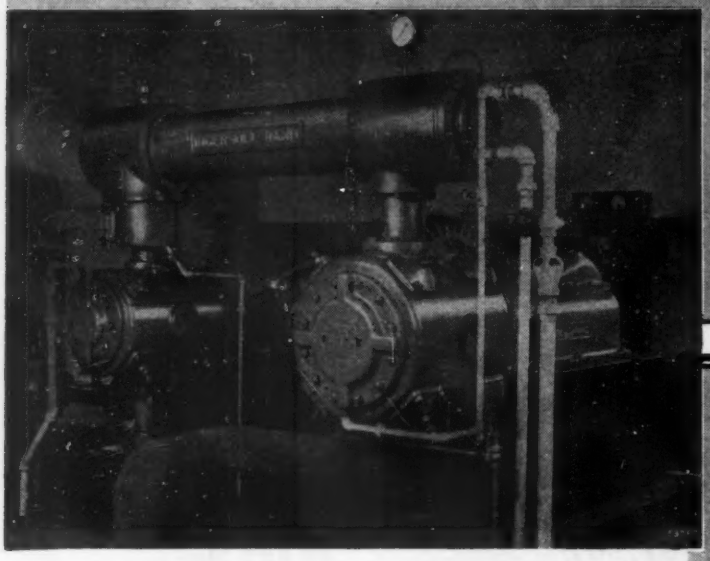

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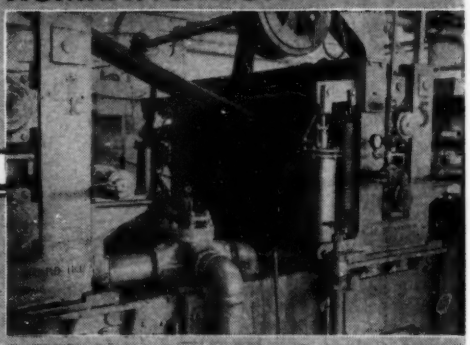

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answers a Mill-Manager's questions about "411"

"Just what is this new "411" I've been hearing so much about?" Answer: "411" is Armour's new synthetic detergent developed specifically for industrial use. Chemically, "411" is the sodium salt of a sulphonated hydrocarbon . . . an anionic surface-active agent having high wetting and detergent properties.

"What properties of "411" make it useful to me?"

Answer: "411" is an efficient wetting-out agent that lowers surface tension sharply, even in low concentration . . . is readily soluble in hot or cold water . . . is unaffected by hardness of water . . . rinses easily and completely, leaves no film . . . can be used in acid or alkaline solutions, in a 1% solution has a pH of 8.5 . . . has good emulsifying properties . . . is stable to oxidation . . . is white in color, with no objectionable odor . . . is exceptionally uniform in performance and appearance.

"What are some of "411's" important textile uses?"

Answer: "411" is effective in wool scouring even in hard water, particularly in the final low-temperature rinse—"411" is used in the scour after the fulling process to remove any residual fulling oils from woven woolen cloth—"411" may be used in the after-washing of cotton and rayon print goods to remove gums and other thickeners—"411" is excellent for the after-washing of resin finishes used for crease-resistant rayons and prevents the development of odor during storage—"411" may be used with alkalies in the kier boiling of cotton grey goods for whiteness and absorbency. For silk degumming, "411" used in combination with soap gives more rapid rinsing and prevents formation of lime soaps—"411" added to regular bleaching agents gives more uniform bleaching results—"411", as a penetrant and wetting agent, serves as a leveling agent to give more even shades in dyeing operations.

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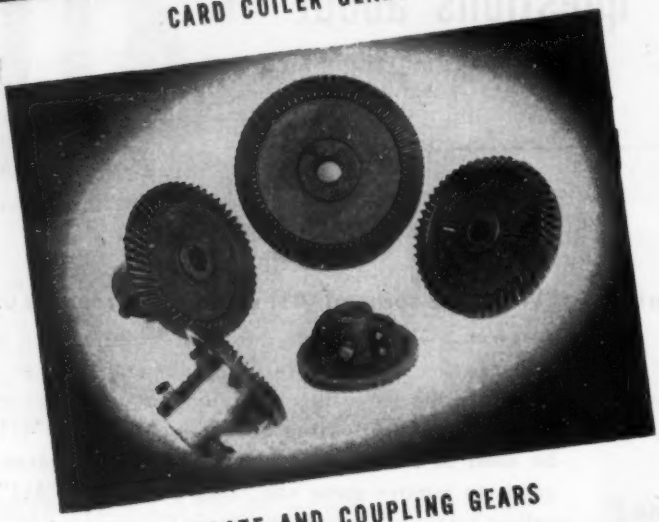

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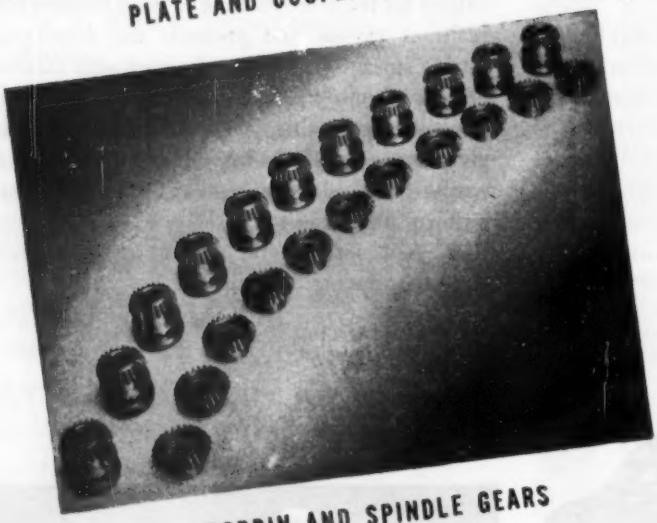

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Henderson Bobbin and Spindle gears, Plate and Coupling gears, and Card Coiler gears to fit all frames. Submit samples, drawings or specifications for quotations.

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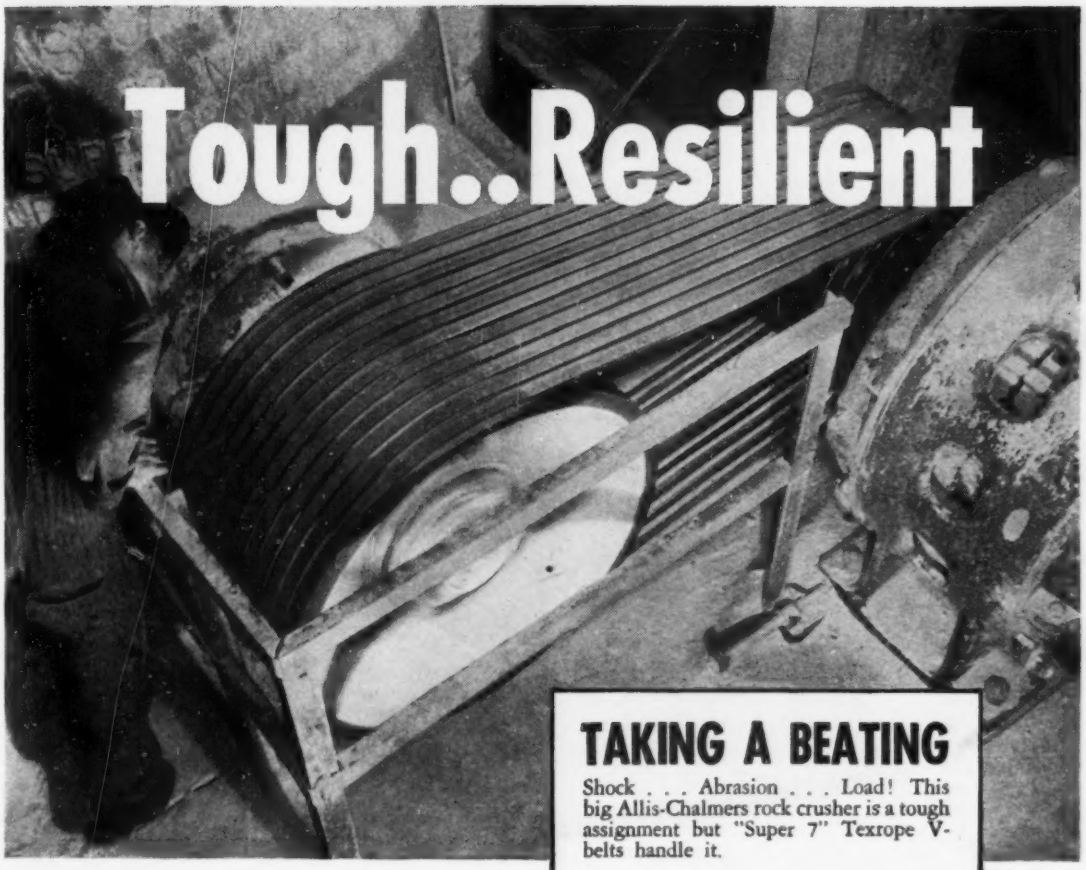
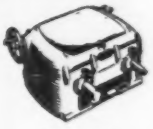

Tough..Resilient
TAKING A BEATING
Shock . . . Abrasion . . . Load! This big Allis-Chalmers rock crusher is a tough assignment but "Super 7" Texrope V-belts handle it.

TEXROPE .. Greatest Name in V-Belt Drives

"Super 7" V-BELTS
Five Types — Sizes to suit every power transmission job.

Texsteel, Texdrive, "Magic-Grip"
— sheaves in a full range of sizes, grooves.

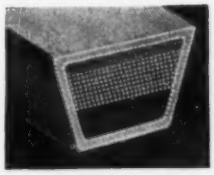
"Vari-Pitch" SHEAVES
Exact variations in speed, stationary or motion control.



SPEED CHANGERS
Speed variations up to 375% at the turn of a crank.

ENGINEERING
Finest V-Belt engineering talent in the world—at your call.

TEXROPE "Super 7" V-Belts result from the cooperative research of two great companies — Allis-Chalmers and B. F. Goodrich. They are sold only by A-C.



. . . You get 7 Great Features in "Super 7" Texrope V-Belts

1. TOUGHER COVER. Two layers of tightly woven long-staple cotton fabric and tough, wear-resistant rubber compound. Protects the belt carcass from grit, moisture and wear — holds its shape — assures maximum belt life.

2. SHOCK ABSORBING. "Super 7" belts combine great strength with the degree of resiliency necessary for long life and smooth power transmission.

3. HEAT RESISTING. *All* "Super 7" V-belts are designed and built to give high resistance to heat.

4. STRONGER CORDS. More cords—imbedded in cool-running rubber compound. A powerful load-carrying structure.

5. PRECISION CURED in pressure molds to assure accurate section and perfect bonding of cords, cover and cushion.

6. ACCURATELY MATCHED. Every belt weighed, measured and carefully inspected before being sized and packed.

7. ENGINEERING LEADERSHIP. "Super 7" Texrope V-belts represent 22 years of research and experience — by Allis-Chalmers, originator of the Multiple V-belt drive.

"Super 7" Texrope V-belts come in five types to meet every operating requirement: *Standard — Heat Resisting — Oil Resisting — Oil Proof* and *Static Resisting*. Call your Allis-Chalmers office or dealer. ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN.

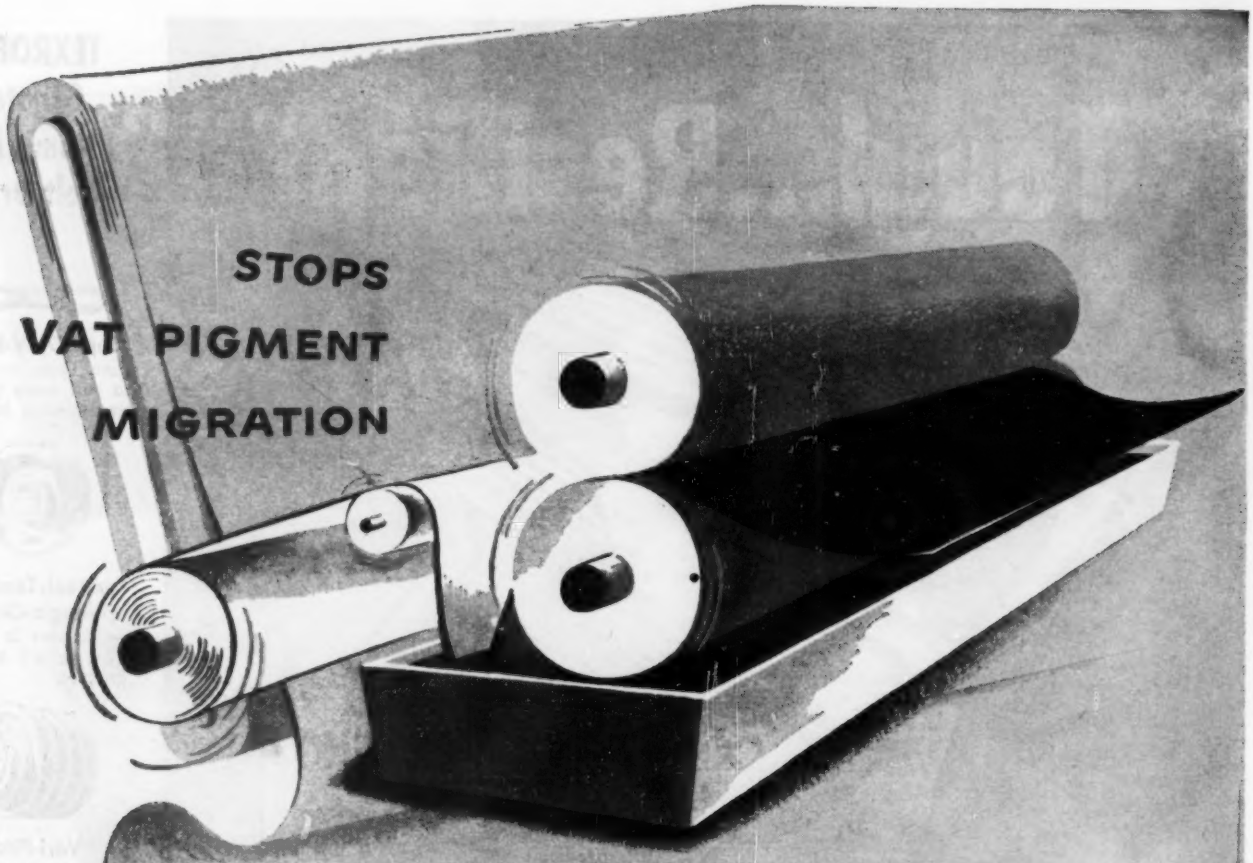
A 2238

Refer to Sweet's Catalog.

ALLIS-CHALMERS

One of the Big 3 in Electric Power Equipment — Biggest of All in Range of Industrial Products

1847 1947
A CENTURY OF SERVICE
to Industry
THAT MADE
America Great



STOPS VAT PIGMENT MIGRATION

HERE IS A RECENT DEVELOPMENT in pigment pad vat dyeing. A little Ceglin in this padding solution improves color absorption—eliminates flushing of the pigment from the surface during reduction—stops migration.

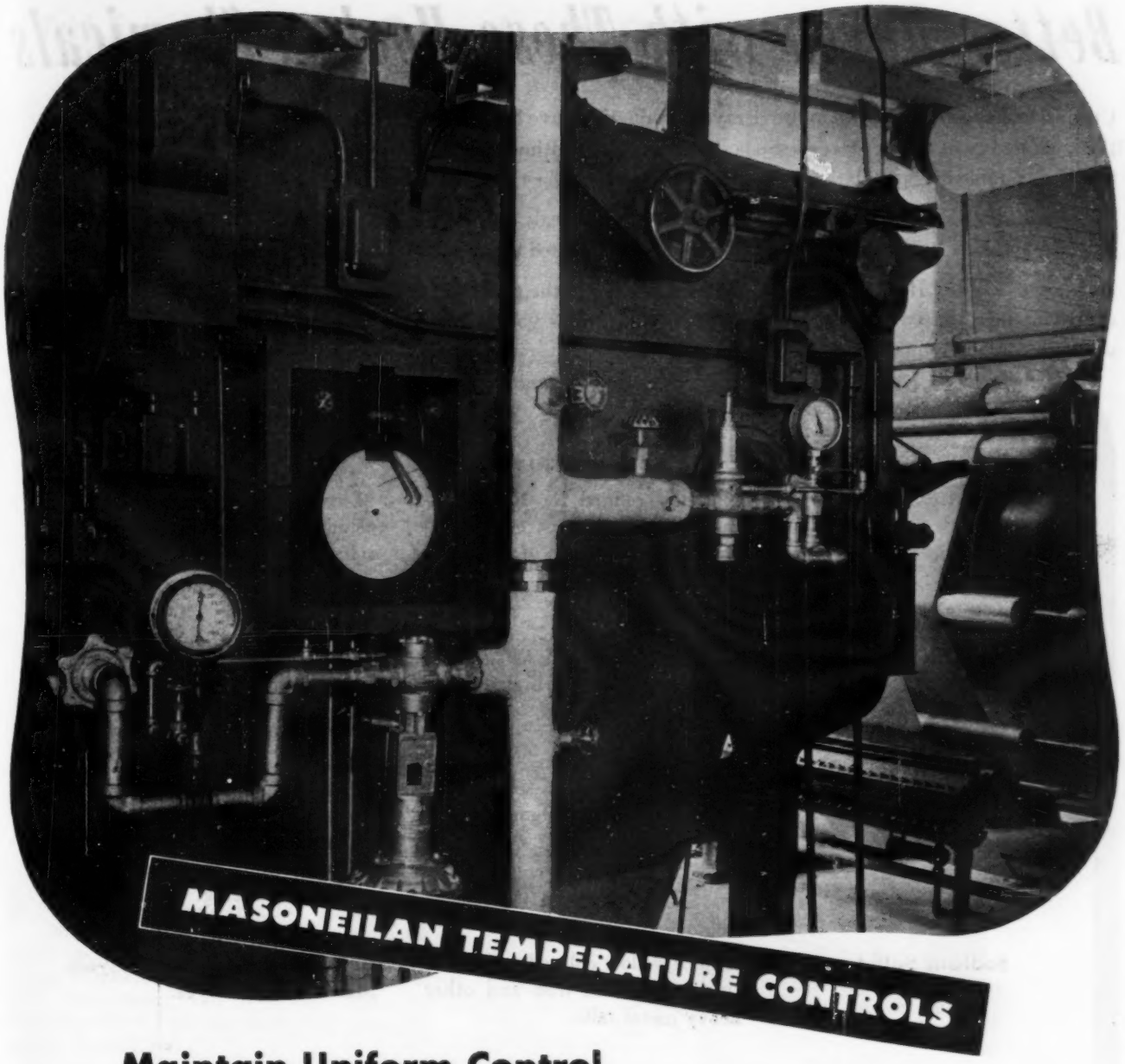
Ceglin is used for dyeing spun rayon without changing the hand. Other distinctive finishes can be obtained simultaneously with the dyeing by varying the type and amount of Ceglin.

Ceglin increases the intrinsic value of fabrics

- provides a finish of distinguished character, making possible a wide range from softness to crispness.
- permanent and durable through repeated laundering.
- aids in the stabilization of shrinkage and stretching.
- promotes tensile strength.
- increases resistance to slippage or distortion.
- improves resistance to abrasion.

SYLVANIA® TEXTILE FINISHES

***Made only by* SYLVANIA DIVISION**
AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
General Sales Office: 122 E. 42nd Street, New York 17, N. Y. *Plant:* Fredericksburg, Va.



Maintain Uniform Control In Palmer Dryers . . . Increase Daily Production

Regardless of whether the dryer is in operation or not, Masoneilan Temperature Controls automatically maintain the predetermined surface temperature. They reduce the amount of seconds due to over- or under-drying . . . increase daily production of processed cloth. Masoneilan Controls also increase blanket life, often as much as 100%.

Investigate Masoneilan Temperature Controls. They will assure uniform drying, prevent overheating of the blanket and provide protection when the dryer is idle and during start-up.

MASONEILAN

MASON-NEILAN REGULATOR CO.

1207 Adams Street, Boston 24, Mass., U. S. A.

New York • Chicago • St. Louis • Philadelphia • Houston • Buffalo • Pittsburgh • Tulsa
Los Angeles • Cleveland • Atlanta • San Francisco • Mason Regulator Co. of Canada, Ltd., Montreal and Toronto

Better Rayon with These Hooker Chemicals

Chemists who have worked to improve rayon production have learned that they can depend upon the high quality of Hooker Caustic Soda. Because of its continued dependability, Hooker Caustic Soda has retained its popularity in the Rayon Industry over the years.

These same high standards are upheld in all Hooker Chemicals. The ever increasing use of Hooker Rayon Chemicals testifies to the confidence users have learned they can place in Hooker products.

Here are five of the Hooker Chemicals that are helping in the manufacture of viscose rayon. The consistent high purity of these Hooker Chemicals lightens your work and enables you to turn out uniformly high quality products.

PRODUCT	*DESCRIPTION*	*USE*
Caustic Soda	Specially refined for Rayon Industry. Impurities carefully controlled. In solutions of 50% and 73% concentration.	Mercerizing pulp to form alkali cellulose having *reproduceable solution viscosity.*
Liquid Chlorine	Light orange liquid or greenish yellow gas of uniform high quality.	Treating process water. Preparation of hypochlorite bleaching solutions.
Lauryl Pyridinium Chloride	A mottled tan semi-solid. Solubility in water is 60 gms per 100 gms of water.	As a cationic detergent to keep spinerettes* clean. Wetting and cleaning agent for textile fibers. As a leveling agent and color modifier in dyeing.
Sodium Sulfide	A light yellow colored solid relatively free from iron and other heavy metal salts.	In desulfurizing rayon yarn. Manufacture of dyes.
Sodium Sulfhydrate	A light yellow colored solid of high purity and negligible metal content.	For preparation of desulfurizing bath. Manufacture of dyes.

Data Sheets and Samples of Hooker Chemicals will be sent when requested on your letterhead. A new 20-page edition of our General Products List has just been published. If you do not have a copy, we suggest you write us for one today. It contains information on Hooker Chemicals and processes many of which have a wide application in the textile field.

**This use is controlled by U. S. Patent Number 2,125,031.*

HOOKER ELECTROCHEMICAL COMPANY

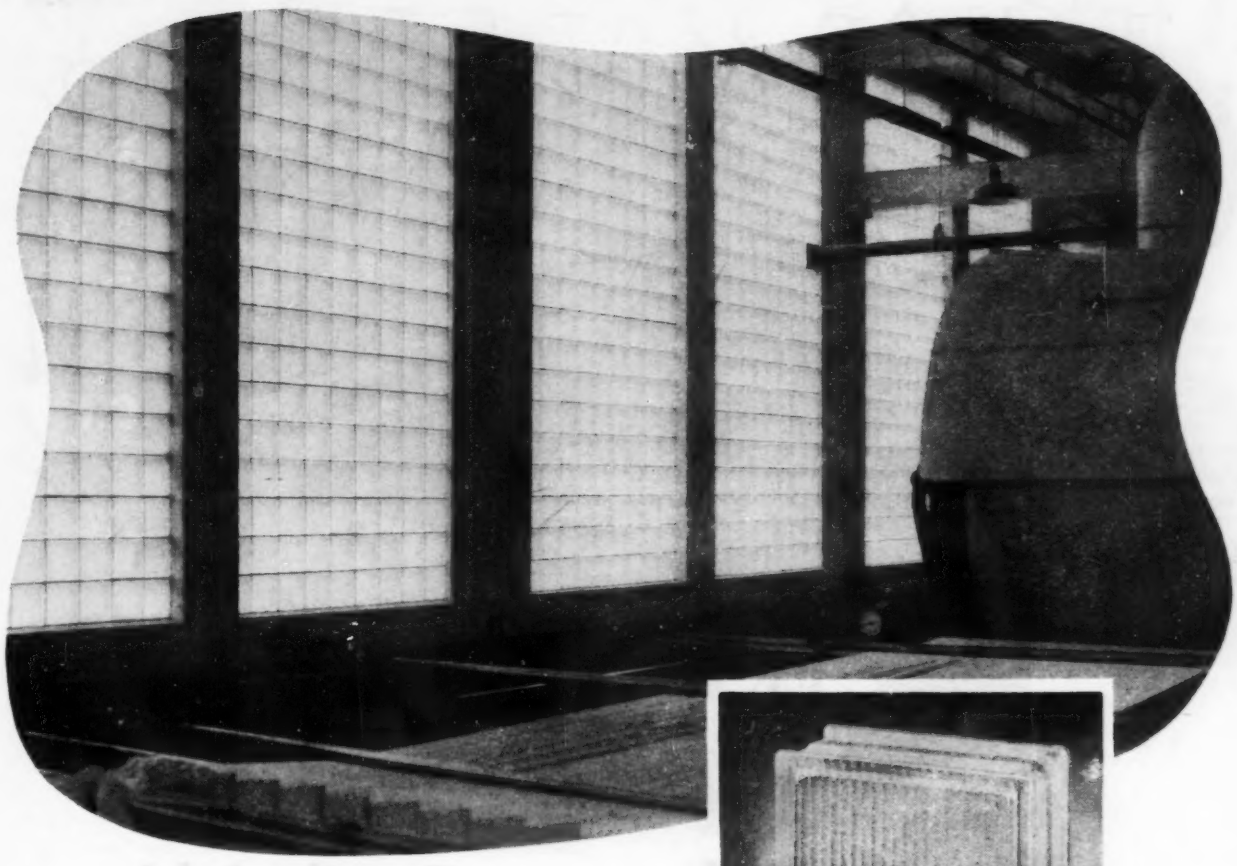
14 Forty-seventh St. NIAGARA FALLS, NEW YORK

New York, N. Y. Wilmington, Calif. Tacoma, Wash.

HOOKER CHEMICALS

8385

THE MARK OF A MODERN BUILDING



It's not surprising that PC Glass Blocks should be regarded by many people today as the mark of a modern building. These blocks are so modern themselves, in both appearance and function, that any building which includes them just naturally seems modern, too.

PC Glass Blocks have won favor in the textile industry largely for one reason: they do so many things so well.

They add to the appearance of any structure . . . because they form bright, neat, translucent panels very appealing to the eye.

They transmit daylight generously into building interiors, and can even direct the daylight to where it is most needed.

Their excellent insulating properties mean greatly reduced heat loss through light areas, and consequent savings in heating and air-conditioning costs. They prevent infiltration of dust and dirt, deaden outside sound, clean easily. They can be combined with transparent glass sash construction. And they harmonize perfectly with any architectural style.

When you are considering new construction or modernizing old buildings, you can use PC Glass Blocks with confidence. They're the mark of a modern building. We invite you to send the coupon for complete information on PC Glass Blocks. Pittsburgh Corning Corporation also makes PC Foamglas Insulation.

PC GLASS BLOCKS

Pittsburgh Corning Corporation
Room 653, 632 Duquesne Way
Pittsburgh 22, Pa.

Please send along my free copy of your book on the use of PC Glass Blocks for Industrial Buildings. It is understood that I incur no obligation.

Name_____

Address_____

City_____ State_____

PITTSBURGH PC CORNING

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS

GLASS BLOCKS

Distributed by PITTSBURGH PLATE GLASS COMPANY
by W. P. Fuller & Co. on the Pacific Coast and
by Hobbs Glass Ltd. in Canada

. . . for every Textile Job!

PROCESS WATER "MADE-TO-ORDER"!

Not just "any kind of water," but controlled, high-quality process water is a must in every textile mill today. For manufacturers know that new and better synthetic fibres and fabrics will play an increasingly important part in the textile industry's future. New equipment will be needed—new manufacturing methods—*even new process water!* More and more mill executives are relying upon modern Permutit equipment to create and control the quality of this new process water.

CUTS COSTS FOR HUNDREDS OF MILLS!

Impurities in ordinary water can easily disturb chemical reactions, causing spotty, off-color dye-lots, and spoiling the finish of fabrics. Permutit equipment removes these impurities quickly and economically. That's why Permutit controlled-quality process water cuts production costs—actually saves money —by safeguarding quality. For full information, write to: The Permutit Company, Dept. T17, 330 West 42nd Street, New York 18, N. Y., or Permutit Company of Canada, Ltd., Montreal.

FOR 34 YEARS

Permutit

WATER CONDITIONING HEADQUARTERS

36" HEAD ON "D" LOOM

You Can Increase Yarn Capacity BY AS MUCH AS 444%

PRESENT LOOM BEAM DIAMETER — INCHES	INCREASED LOOM BEAM DIAMETER — INCHES											
	40	38	36	34	32	30	28	26	24	22	20	18
18	444.0	389.0	337.5	289.0	243.0	200.0	159.5	122.2	87.5	55.6	26.4	0
20	329.5	287.0	246.0	207.5	171.4	137.4	105.5	75.8	48.4	23.1	0	
22	249.0	214.2	181.3	150.0	120.5	92.8	66.9	42.8	20.5	0		
24	189.5	160.5	133.3	107.5	83.0	60.0	38.5	18.4	0			
26	144.4	120.0	96.8	75.0	54.4	35.0	16.9	0				
28	109.1	88.2	68.5	49.7	32.1	15.5	0					
30	81.0	63.0	45.8	29.6	14.4	0						
32	58.3	42.5	27.5	13.4	0							
34	39.6	25.7	12.5	0								
36	24.6	11.7	0									
38	11.1	0										
40	0											

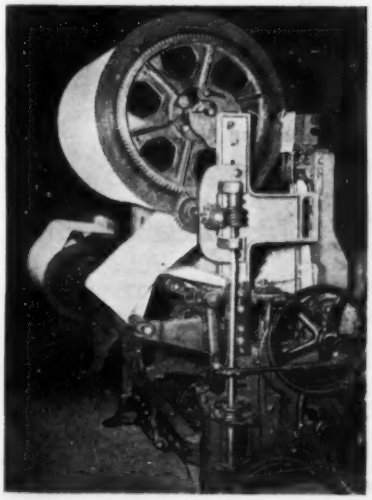
EXAMPLE:
PRESENT BEAM — 20" DIA., 750 YARDS
LARGE BEAM — 26" DIA.
PERCENT INCREASE 75.8
ADD 100 to .758 1.758
CACAPITY OF 26" BEAM 750 x 1.75 1319 YARDS

REDUCE RUN-OUTS!
CUT HANDLING!
SAVE LABOR!
INCREASE PROFITS!

Look for increased efficiency and PROFITS when you equip your mill to run larger beams and longer warp.

Large beams with greater yarn capacity increase loom running time . . . reduce runouts. Time-consuming warp tying and beam handling—while machines stand idle—are cut to a minimum.

Step up slasher and loom room efficiency and profits. Install larger beam heads now. Built for long life, these high grade heads are expertly designed and machined. Barrels of thoroughly seasoned woods turned straight and true . . . sealed against moisture.



BIGGER BEAMS

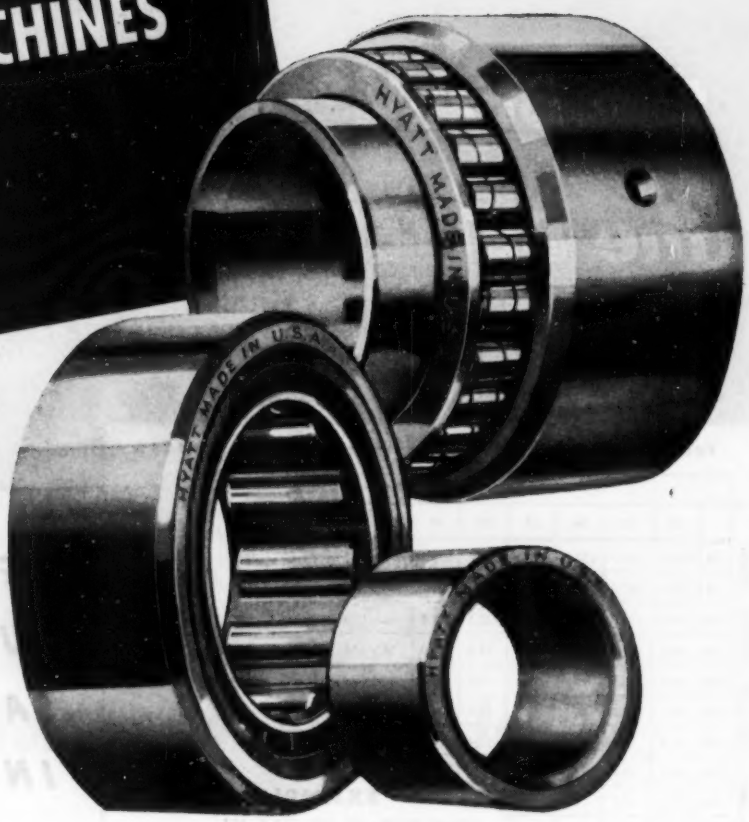
can be easily installed on top of the looms in weave sheds with narrow alleys. Operated with Roper, Bartlett or independent let-off

WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

WEST POINT, GEORGIA

You will have to live with YOUR NEW MACHINES For a long time*



***Make sure they are as efficient as they can be made at time of purchase**

WHEN you get ready to discuss specifications consider the bearings. They hold your machines together—determine the hours of accurate life built into the machine.

TAKE THE LOOM FOR EXAMPLE

When you specify HYATT ROLLER BEARINGS for crank, cam, and rocker shafts, vibrating whip rolls, take-up roll, yarn beam and pick shafts you can reliably expect the following advantages:

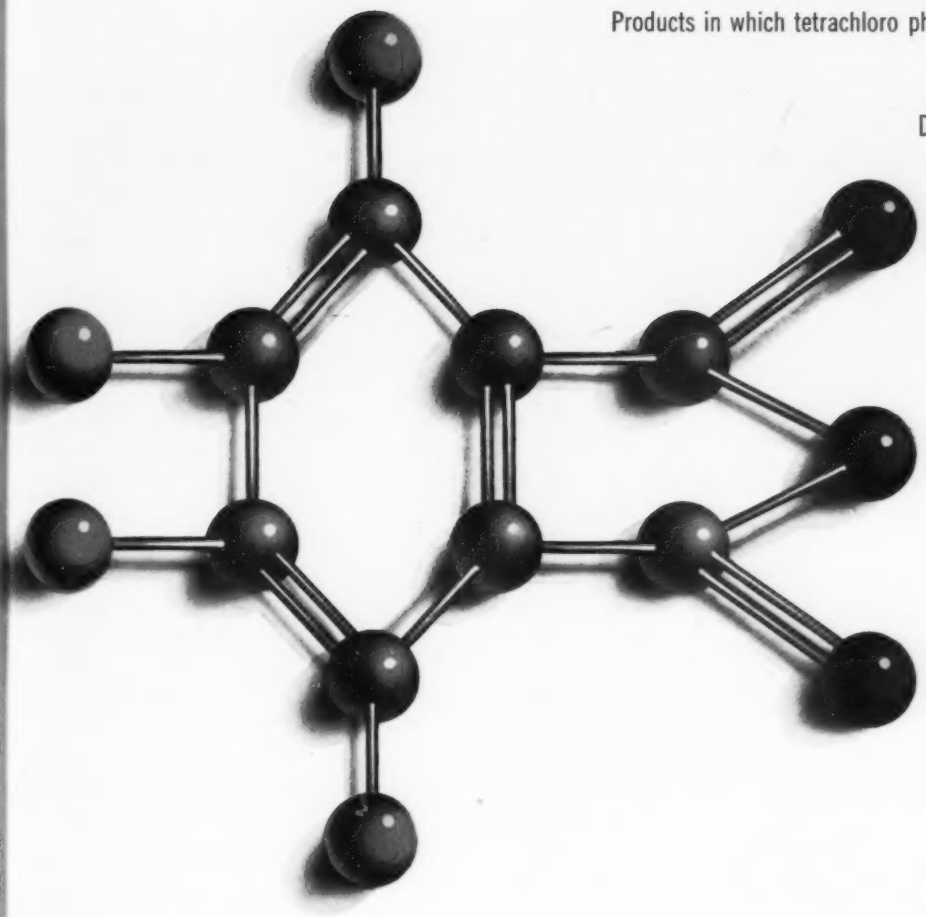
1. **Less than ½ the effort required to turn the loom over by hand.**
2. **Less fixing—because there is practically no bearing wear.**
3. **Much less lubrication. Bearings are adequately sealed in housings made by the loom builder.**
4. **Higher quality cloth is produced.**
5. **Production is increased.**
6. **Fire Hazard is reduced.**
7. **Power is saved.**
8. **Accuracy of bobbin or shuttle transfer maintained.**

Hyatt Roller Bearings have been successfully applied to all types of looms in volume quantities for 30 years. Hundreds of millmen have proved to their own satisfaction that Hyatt Roller Bearings stand up, make a loom run better, are a worth while investment. Be sure to specify "Hyatt Equipped" on your next order. Further information will be gladly furnished if you'll write to HYATT BEARINGS DIVISION, GENERAL MOTORS CORPORATION, HARRISON, N. J.

HYATT ROLLER BEARINGS

NIAGATHAL W

Tetrachloro phthalic anhydride. Approx. 50% chlorine



Products in which tetrachloro phthalic anhydride has been used

DYES AND INTERMEDIATES

Types:

- anthraquinone
- benzoylbenzoic acid
- fluorescein
- indigo
- phenolphthalein

Esters for . . .

- Insulating materials
- Lubricants
- Pharmaceuticals
- Plasticizers
- Protective coatings
- Synthetic resins

NIAGATHAL A

Tetrachloro phthalic acid hydrate

- Reacts more readily with alcohols and bases
- Greater solubility in some organic solvents
- ★ Available in experimental quantities

Write for full details and samples

An Essential Part of America's Great Chemical Enterprise

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, N. Y.

Caustic Potash • Caustic Soda • Paradichlorobenzene • Carbonate of Potash
Liquid Chlorine • Niagathal (Tetrachloro phthalic anhydride)

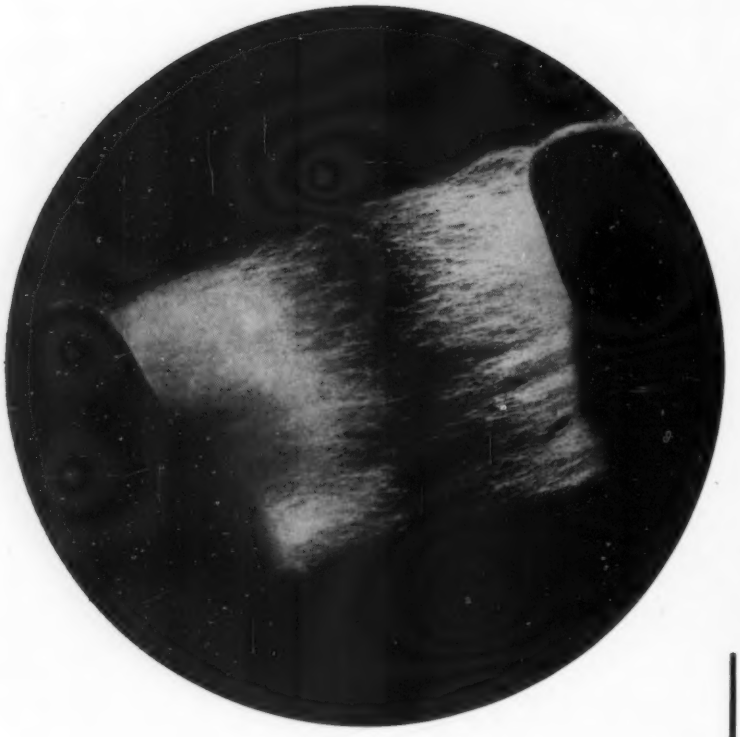
NIAGARA ALKALI COMPANY
60 East 42nd Street
New York 17, N. Y.

Send to my attention, sample quantities of Niagathal W____, Niagathal A____. Send me Technical Bulletin on Niagathal____.

Name_____ Title_____

Company_____

Address_____



TECA

improves results all down the line

- *hand*
- *draping qualities*
- *wrinkle resistance*
- *stability*
- *ironed-in crease retention*
- *soil and stain resistance*
- *mildew resistance*

Laboratory check-ups and wear-test performance have convinced many a manufacturer, that by stepping up the TECA content, he increases those qualities in a fabric which sell it once—sell it again.

TECA, Eastman *crimped* acetate staple mixes well with other fibers—performs smoothly on any spinning system. It suggests unlimited possibilities—for men's and women's wear fabrics.

For further information about TECA, consult A. M. Tenney Associates, Inc., 10 East 40th St., New York, sales representatives for TENNESSEE EASTMAN CORPORATION (Subsidiary of Eastman Kodak Company), KINGSPORT, TENNESSEE.

EASTMAN

crimped acetate rayon

A BUYING GUIDE FOR ABRASIVES

POINT No. 6

LOCAL DISTRIBUTOR SERVICE

With progressive purchasing methods dictating improved efficiency of supply, the services of your CARBORUNDUM distributor assume increased importance. Prompt delivery of standard wheels, coated abrasives, sticks and stones, and grains by CARBORUNDUM is assured from large and varied stocks conveniently located nearby. Factory inventories of these items can be safely and economically reduced. More efficient use of abrasives is promoted through a local staff, trained by CARBORUNDUM, and familiar with varied applications. They are informed on latest developments and have access to CARBORUNDUM representatives when the problem is too difficult or unusual. Intelligent handling and efficient office routine is also pointed to by some customers who prefer the personal consideration and attention rendered by these modern distribution units. These services account in part for the increasing preference for products by CARBORUNDUM. The Carborundum Company, Niagara Falls, New York.

A Good Rule for Good Grinding...CALL IN

CARBORUNDUM

TRADE MARK

- BONDED ABRASIVES
- COATED ABRASIVES
- ABRASIVE GRAINS AND FINISHING COMPOUNDS

All standard shapes are supplied in grinding wheels by CARBORUNDUM.

Sheets of Coated Abrasives for a variety of applications.

"Carborundum" is a registered trademark which indicates manufacture by The Carborundum Company.

Tool Room sticks and stones that cut fast, last long, and hold their form.

Texalox roll covering grips fabrics firmly, surely but gently.

A fillet cloth that assures sharp economical grinding of card clothing.

ACCOTEX COTS *spin*

because they have

8 ADVANTAGES OF ACCOTEX COTS

1. LONG SERVICE—Accotex Cots are tough. And they can be rebuffed five or six times.

2. GOOD DRAFTING—Accotex Cots retain their excellent grip, because their cork-and-rubber composition resists slicking.

3. REDUCED EYEBROWING—The resistance to slicking minimizes eyebrowing.

4. REDUCED LAPPING—Accotex Cots have little affinity for textile fibers and are non-sweating even in humid weather.

5. GOOD START-UP—Accotex Cots are non-thermoplastic and resist flattening.

6. SOLVENT RESISTANCE — Accotex Cots are not affected by oil, water, dyes, or commonly used textile solvents.

7. SEAMLESS CONSTRUCTION—Accotex Cots have no seams, no structural weaknesses to cause failure in service.

8. QUICK ASSEMBLY—Accotex Cots are ready glued for easier, quicker assembly. Simply moisten glue and apply cot.

ARMSTRONG'S ACCOTEX COTS

quality yarn longer

rubber's toughness and cork's "grip"

Because Accotex Cots combine the advantages of both synthetic rubber and cork, they spin quality yarn longer than "straight" synthetic covers. Specially compounded synthetic rubber gives Accotex toughness. High-friction cork provides consistently better drafting for consistently high yarn strength. And because cork also helps prevent slicking, Accotex Cots don't need the frequent rebuffing that does so much to shorten cot life.

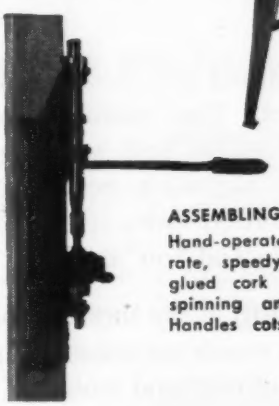
You get other spinning advantages from this combination of cork and synthetic rubber. Accotex Cots eyebrow less and their resilience provides quick recovery from hard ends. And since they can be rebuffed as many as five or six times, Accotex Cots give you that many extra full service lives.

Longer life and better drafting are only two of eight important reasons why these superior cots are now serving more spindles than any other roll covering. Check your present roll coverings against the facts about Accotex listed at left. Then ask your Armstrong representative for samples, prices, and any additional information you may want. Or write today to Armstrong Cork Company, Textile Products Department, 3607 Arch Street, Lancaster, Pennsylvania.

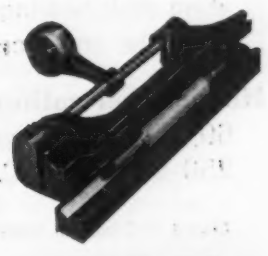
COMPLETE ROLL COVERING SERVICE

You can get everything you need for complete roll covering service from your Armstrong representative. He can supply not only all three modern types of covers but also the roll shop equipment required to apply and service them.

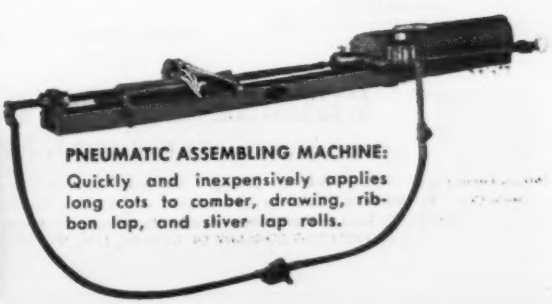
BUFFING MACHINE:
Precision-buffs all modern types of cots. Adjustable for lengths and diameters of rolls ordinarily used.



ASSEMBLING MACHINE:
Hand-operated. Facilitates accurate, speedy assembly of ready-glued cork or synthetic cots to spinning and card room rolls. Handles cots up to 4½" long.



ROLL TESTING GAUGE:
A paralleling device used to guide the setting of the buffing machine and to check trueness of rolls after they have been rebuffed.



PNEUMATIC ASSEMBLING MACHINE:
Quickly and inexpensively applies long cots to comber, drawing, ribbon lap, and sliver lap rolls.

CORK COTS ACCOTEX APRONS
ROLL SHOP EQUIPMENT

Use them inside or OUTDOORS!

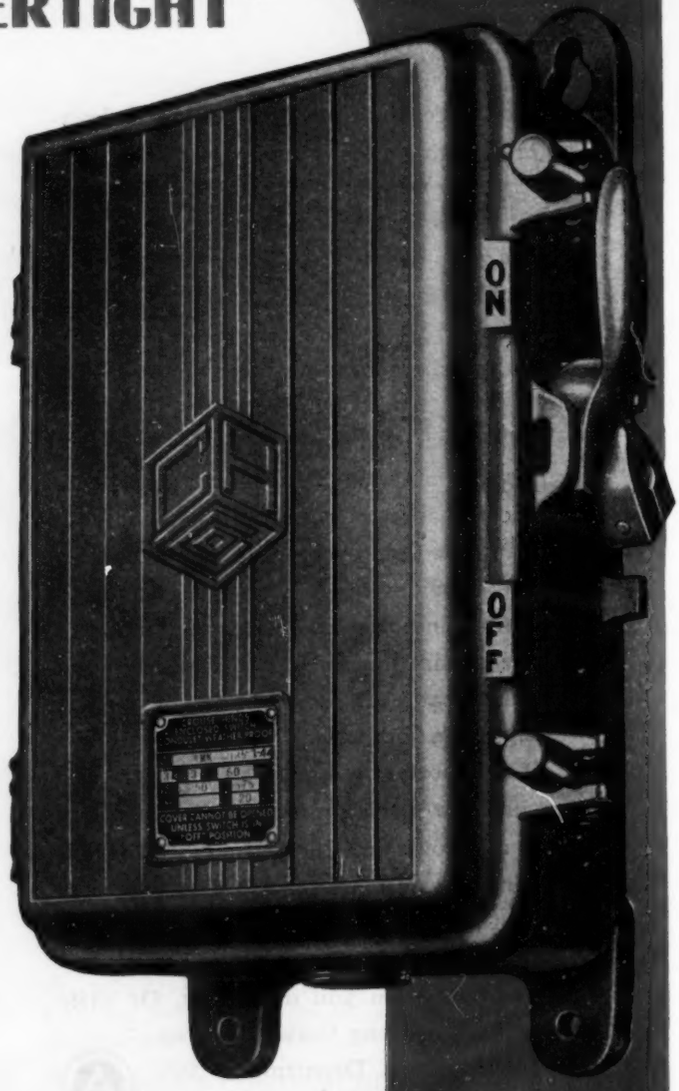
It's all the same to Type WMK

RAINTIGHT and WATERTIGHT*

Enclosed Safety Switch

CONDULETS

**NEMA Types III and IV*



Safety. Positive interlock prevents opening the case unless switch is "off." Dead front switch is held in "off" position while case is open.

Switches. Quick make and break mechanism. Double break, reinforced, positive pressure-type blade and jaw construction. Positive pressure fuse clips. Combination solder or solderless wire lugs.

Cast metal case. Strong and durable. Four sturdy mounting feet. Many possible threaded hub arrangements for both vertical and horizontal conduit. Cover may be padlocked to prevent unauthorized entry. Operating handle may be padlocked "on" or "off."

Permanent lubrication in the threaded operating shaft bearings resists corrosion and prevents the entrance of dust and moisture.

Horsepower ratings. 2 through 50-H.P. 30, 60, 100 or 200-ampere. 230-575-volt A.C. 250-600-volt D.C.

Listed in Condulet Catalog 2500, Section 50, Page 20.

CONDULET is a coined word registered in the U. S. Patent Office. It designates a product made only by the Crouse-Hinds Company.

A Nationwide Distribution Through Electrical Wholesalers

Our 50th Anniversary
1897 — 1947

CROUSE-HINDS COMPANY
Syracuse 1, N. Y.

Offices: Birmingham — Boston — Buffalo — Chicago — Cincinnati — Cleveland — Dallas — Denver — Detroit — Houston — Indianapolis Kansas City — Los Angeles — Milwaukee — Minneapolis — New York — Philadelphia — Pittsburgh — Portland, Ore. — San Francisco Seattle — St. Louis — Washington. *Resident Representatives:* Albany — Atlanta — Charlotte — New Orleans
CROUSE-HINDS COMPANY OF CANADA, LTD., *Main Office and Plant:* TORONTO, ONT.

CONDULETS
FLOODLIGHTS
TRAFFIC SIGNALS
AIRPORT LIGHTING

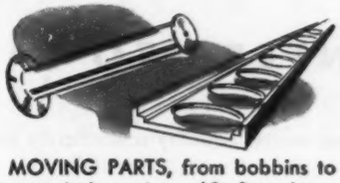
"THEY'RE TOUGH COMPETITION"

. . . not because they're located on a better stream, or own their own foundry, or send their output farther, faster, in clipper ships . . .

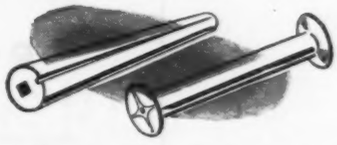
No, today's textile successes are being built on ingenuity and efficiency in the *processes* themselves. Higher machine speeds, better control of atmospheres, improved working conditions. "Nickel and dime" savings that mount into the thousands through the year. Mills that make ingenuity and efficiency their daily watchwords are *tough competition*. They are the mills that are making fullest use of Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 1939 Gulf Building, Pittsburgh 19, Pennsylvania. Sales offices in principal cities.

★ IDEAS YOUR COMPETITORS ARE USING TO BOOST EFFICIENCY WITH ALCOA ALUMINUM ★

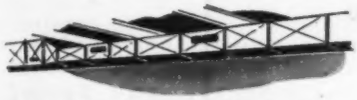
LIGHTER MACHINE FRAMES and parts made of Alcoa Aluminum lighten floor loading and decrease vibration.



MOVING PARTS, from bobbins to extruded sections 60 feet long, boost machine speeds.

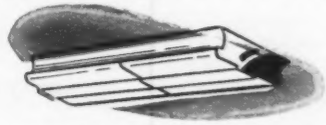


CLOTH ROLLS, loom and warp beams are clean, splinter-free, cost less to ship.



DUCT WORK of Alcoa Aluminum Sheet eliminates drip stains, protects every yard.

LIGHT, CLEAN walls and better work come with aluminum paint, pigmented with Alcoa Albron Pigment.



ALZAK* ALUMINUM reflectors light working areas efficiently, require little maintenance.

*Patented process, Aluminum Company of America

MORE people want MORE aluminum for MORE uses than ever

ALCOA FIRST IN ALUMINUM

ALCOA ALUMINUM

IN EVERY COMMERCIAL FORM

Lanese*

opens the way to a wide variety of quality fabrics

Lanese—the trademark for Celanese* synthetic staple fiber, produced by the cellulose acetate process—adds important advantages when used in combination with cotton, wool or viscose process rayon. Its distinctive properties insure a yarn capable not only of producing great versatility of weaves and effects, but also possessing quality advantages that assure the soundness of the fabric. Where the proportion of Lanese is dominant, fabrics gain markedly in such qualities as richness of hand, improved drapability, variety of color effects and increased dimensional stability.

POINTERS TO LANESE

Appreciably less waste—quality scientifically controlled.

Staple lengths uniform from bale to bale, no off grades.

Lanese prices exceptionally stable—eliminating need for hedging.

Continuity of supply assured with Lanese—unnecessary to carry long-range inventories.

Celanese* Lanese*

SYNTHETIC STAPLE FIBER

*Reg. U.S. Pat. Off.

CELANESE CORPORATION OF AMERICA, 180 MADISON AVE., NEW YORK 16, N. Y.

Branch Offices: PHILADELPHIA 7, 12 South 12th Street • CHARLOTTE 2, 1106 Liberty Life Building • BOSTON 10, 140 Federal Street

PNEUMAFIL

means

Improved yarn quality

Increased production

Lowered costs

... and the Spinners like it!

IMPROVES YARN QUALITY

Eliminates "wild" or flying ends and spinning doublings; decreases slubs, gouts, fly and end piecings.

LOWERS LABOR COSTS

Reduces ends down; reduces time of putting up an end; decreases all cleaning in general, thread boards and roller beams in particular.

IMPROVES WASTE SALVAGE

Waste machine processing is eliminated, thus preserving fibres intact, saving power, reducing handling and transportation; reduces threads in waste; no "white" waste on floor.

BETTER RUNNING WORK

No fly-overs; no "balled up sides"; less broken fibres in re-worked "white" waste; better air conditions.

Learners Training Cost Reduced

An operation is eliminated; work spoilage by learners lessened; less "teacher time" required.

INCREASES PRODUCTION

Less ends down; fewer steel and top roll laps; no stoppage because of "balled up sides"; increased winder or spooler production due to less gouts, slubs, and fly in yarn.

Write or Wire for Full Information to 2516 Wilkinson Boulevard

☆ Pneumafil Corporation ☆ ☆ Charlotte 6, N.C. ☆

Gaylord Boxes

A FEATURE OF GAYLORD BALANCED DESIGN—

Dependable Strength . .

To properly safeguard your product in freight cars, trucks, and warehouses and in delivery to retailer or consumer, you must be sure of ample, *dependable strength.* • Gaylord balanced design and materials assure you greater strength.

GAYLORD CONTAINER CORPORATION, General Offices: SAINT LOUIS

Standard of The Packaging Industry

- Corrugated and Solid Fibre Boxes
- Folding Cartons
- Kraft Grocery Bags and Sacks
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New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle
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Greenville • Portland • St. Louis • San Antonio • Memphis • Kansas City • Bogalusa
Milwaukee • Chattanooga • Weslaco • New Haven • Appleton • Hickory • Greensboro • Sumter

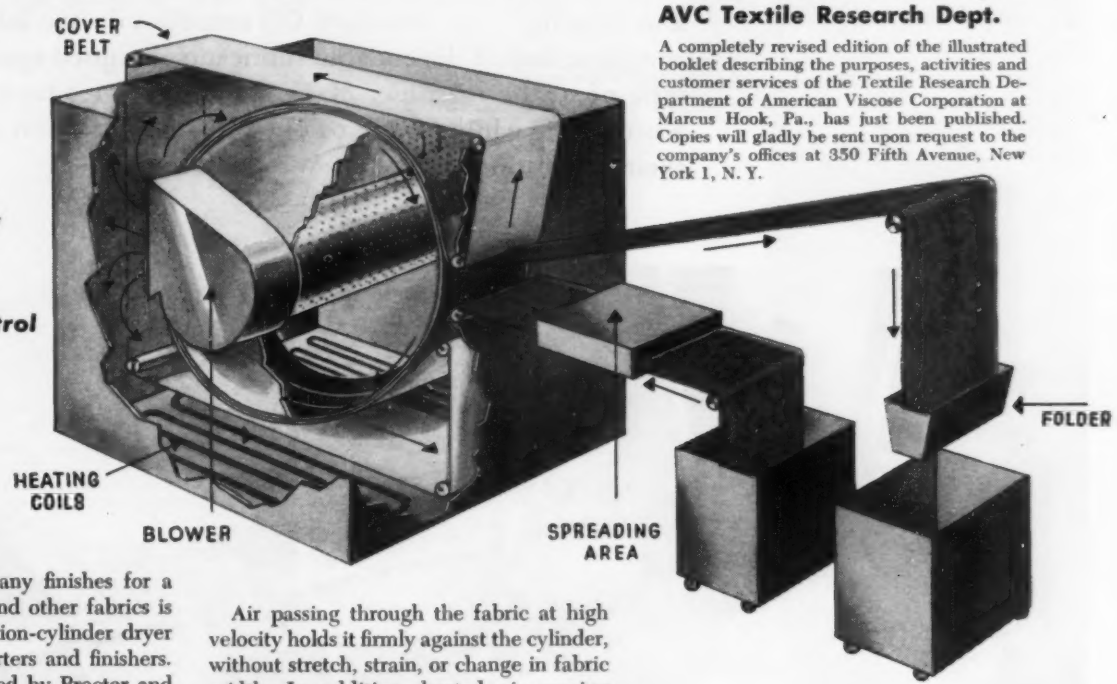
122

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. July, 1947

New Suction-Type Cylinder Dryer

Saves Time, Handles Variety of Fabrics, with Precision Control



Quality control over many finishes for a wide variety of rayon and other fabrics is achieved by a new suction-cylinder dryer now available to converters and finishers. The dryer was developed by Proctor and Schwartz, Inc., and jointly the Textile Research Department of the American Viscose Corporation.

The fabric is entered into the machine through a spreading device and is then fed onto a scrim-covered, perforated, revolving cylinder. A continuous cover-belt of very open mesh holds the fabric in position on the cylinder.

Blowers force air, heated to desired conditions, through the cover belt, fabric and cylinder. Disks on the cylinder shaft are adjustable to fabric width to confine air flow solely to the area covered by the fabric.

Air passing through the fabric at high velocity holds it firmly against the cylinder, without stretch, strain, or change in fabric width. In addition, heated air passing through the fabric has proved a much more efficient drying means than conventional air "impingement," in some cases reducing drying time from thirty minutes to five.

The entire mechanism can be instantly stopped and reversed if defects are discovered in goods about to enter the dryer, thus preventing the defects from passing through the machine and becoming permanently set in the finish.

The dryer has been thoroughly proved in practical service on tricot fabrics, circular knit fabrics, open-width woven fabrics, on resin finishing, rayon and silk prints and others. One man can operate it.

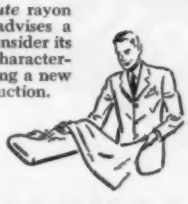
Revised Booklet Tells Story of AVC Textile Research Dept.

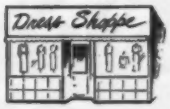
A completely revised edition of the illustrated booklet describing the purposes, activities and customer services of the Textile Research Department of American Viscose Corporation at Marcus Hook, Pa., has just been published. Copies will gladly be sent upon request to the company's offices at 350 Fifth Avenue, New York 1, N. Y.

RAYON 20 YEARS AGO

More rayon has been blended with wool for women's apparel this fall than in any previous year.

Don't just *substitute* rayon for other fibers, advises a trade authority. Consider its own distinctive characteristics when planning a new rayon cloth construction.





Practically all leading dress goods manufacturers are now using rayon in some manner—and their products are displayed by nearly every dress shop in the country!

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

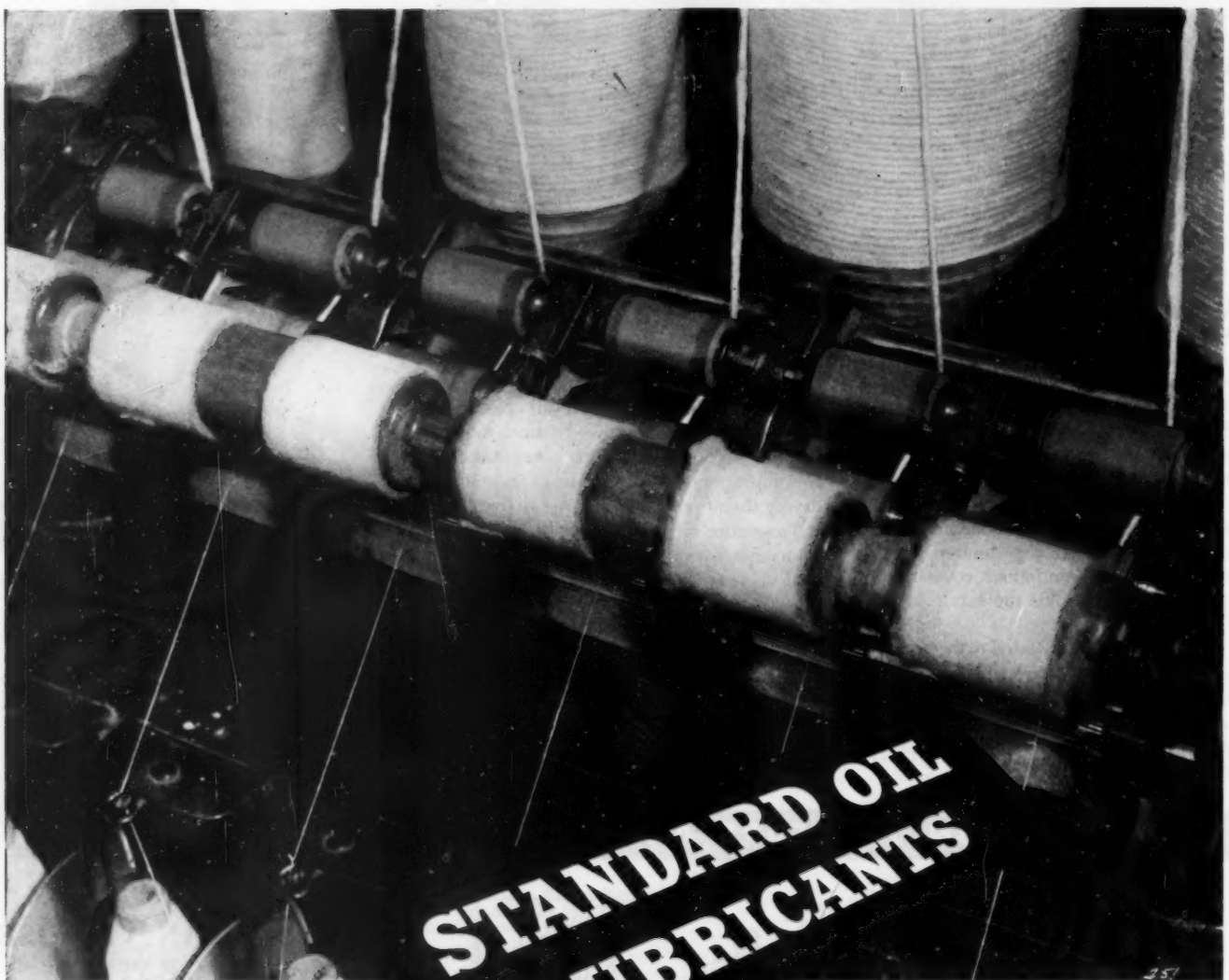
AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Offices: 350 Fifth Avenue, New York 1, N.Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.; Washington, D. C.; Wilmington, Del.

Uniform tension and twist are essential to a smoother, stronger yarn. Because they resist oxidation and thickening, and make for a more uniform spindle speed, Standard Oil spindle oils have been helping mills throughout the South produce *better* yarn, and *more* yarn, for *many* years. . . . Standard Oil spindle oils are made from specially selected crudes, carefully distilled and processed to secure maximum resistance to oxidation and the most efficient lubrication results. By cushioning against vibration, they permit higher spindle speeds and resist hunting and lagging. . . . Standard Oil spindle oils are but one type of a complete line of dependable lubricants designed specifically for each type of textile machine. Many mill superintendents have found it worth their while to talk to one of our lubrication engineers about their lubrication problems. Why don't you?

for smoother yarn



STANDARD OIL COMPANY INCORPORATED IN KENTUCKY

Solving your SIZING puzzle

Photo: Courtesy of American Viscose Corp.

This protein powder meets every requirement of the perfect sizing product. CETASIZE is complete—no softeners or penetrants necessary...CETASIZE is uniform—as are all Stein Hall products passed by Stein Hall laboratories...CETASIZE is easily removed—no prolonged soaking; soaping does the trick...CETASIZE runs clear—no foaming...CETASIZE is easy to prepare—disperse in cold water, then heat to approx. 175° F. Hold 10 minutes, then use...Request a sample today—or ask for a Stein Hall man to come and demonstrate!

Stein Hall produces a complete line of: *Textile Starches, Gums, Dextrines and Specialty Products, W Gum D, Victory K2W Gum; RTF Gum; KAC No. 4 with B-2 or Sussex Gum; 96R, Velveen XX; RTC Gum; Cetosol SF; Sho-Pal Thickener and Binder.*

the complete warp sizing product for FILAMENT ACETATE YARNS

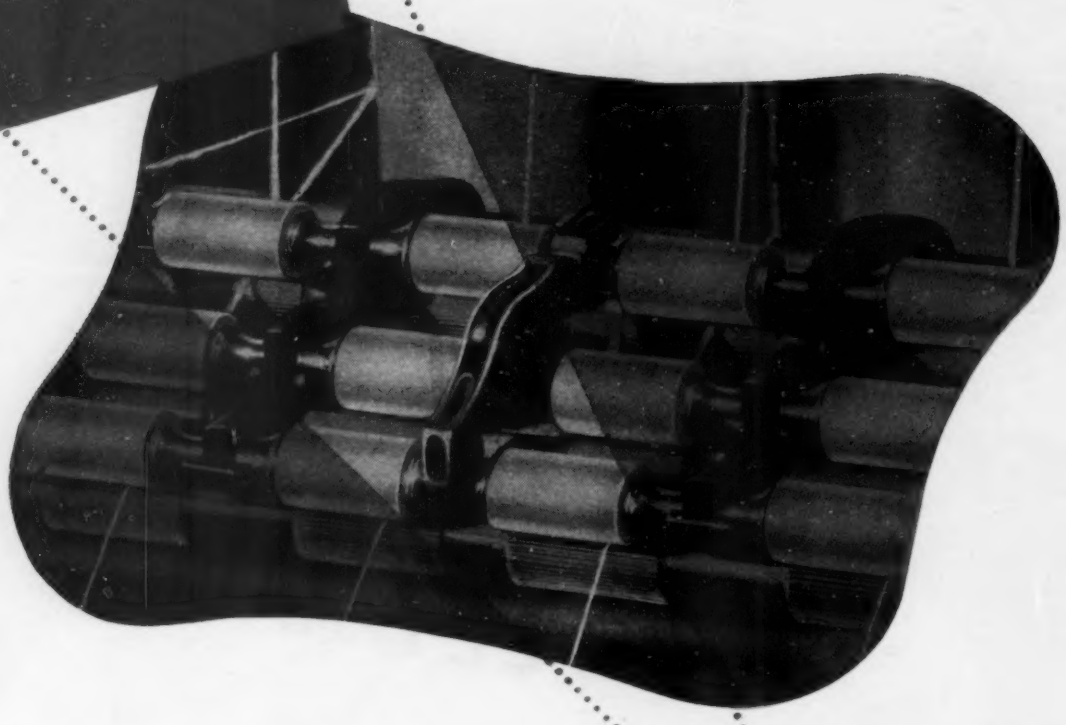
STEIN HALL

EST. 1866

285 MADISON AVENUE NEW YORK 17, N. Y.

Branch Offices in 16 Cities in the U. S. and Canada

Daycos never groove, hollow out, flatten or distort



Dayco roll coverings are especially engineered with an extremely durable surface, perfect cushion and exactly the right coefficient of friction. That's why they won't groove, hollow out, flatten or distort, no matter how long they run . . . why they outlive all other type roll coverings.

Whether you use flat or revolving clearers, whether you draft cotton or synthetics, Dayco roll coverings will produce better quality yarn, more economically. A Dayton textile product engineer will gladly prove this to you. He'll call at your convenience. Write today, to . . .

TEXTILE PRODUCTS DIVISION • DAYTON RUBBER
Main Sales Office: Woodside Bldg., Greenville, S. C.
Factory: Waynesville, N. C.

ADDITIONAL REASONS WHY YOU SHOULD USE DAYCO COVERINGS

- Large reduction of ends down
- More of the foreign elements are removed from yarn
- Specially compounded for uniform wear, lengthening service life
- Same trouble-free service, for special types of synthetic and synthetic blends of yarn
- Not affected by humidity or temperature changes
- Oil resisting and static-free
- No grooving—less ends down
- Easy to apply

Dayton Rubber

THE HOUSE OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

Motion Pictures

Frankly we were a bit surprised to see how many motion pictures are available to the industry, as reviewed in the article "Visual Aids for the Textile Industry," on page 88. This subject received accelerated support by the armed services and by many plants on war jobs because of its proven value in training and production programs. The titles recorded in the article will be a nucleus for additional films to be made for this industry.

◆

A Tip to C. of C's.

"Intend to leave Hawaii shortly and to return to the mainland and shall look around for a small, progressive town in the South in which to start up a plant, small at first, for the purpose of preparation of (cotton) cellulose acetate as used for plastic manufacture."

FRED WIDE

Oahu, T. H.

◆

Take a Bow, Fuller

"One of the nicest pictures I have ever seen of a textile executive is the one you had taken of Fuller Callaway in his electronics laboratory."

MILDRED G. BARNWELL ANDREWS
Cotton Mills Industry-Wide
Committee on Public Relations
New York City

◆

No "Ifs, Ands or Buts"

The telegram printed on this page was our answer to a long distance phone call from one of the industry's leading chemical manufacturers whose officials wanted to size up the reasonably immediate future of the textile industry. It has never been TEXTILE INDUSTRIES' policy to hedge on its opinion, to say thus and so will happen "if, and, and but" . . . nor to stick our heads in the sands ostrich-wise, rather than face the facts.

We believe there are a number of companies, as there always have been, who will stick their tails between their legs and run at a bit of bad news because they can't see beyond their noses.

We believe there are many 90-day wonder sales managers who did all right when they could sit in their offices and tell buyers they were sold up and had a tremendous backlog, but who now feel insulted because that backlog is dissipated and they have to get off the seat of their trousers to do some active selling; and many of them didn't have sense enough to plan ahead and prepare the ground for the time that is now at hand.

If Free Enterprise is the American way of life, and we certainly believe it is, then competition is the life blood of business. To the men who say, "Come hell or high water we'll keep right in there pitching," we say that there is nothing in the foreseeable future you need fear . . . and if there were, we know you would consider it a challenge to be met full on, just as you have met other crises.

◆

Union for Union Organizers

John L. Stickley of Charlotte suggested to Ye Ed last fall that there was money to be made organizing union organizers. Now he sends on a news clipping of a suit filed with NLRB in Winston-Salem by a member of the Organizers Independent Union, which is composed of organizers for the C.I.O. Now if there were a strike by that Union, we could say "Who's doing what to whom?" Well, there's no need stopping here. What's wrong with organizing the organizers of union organizers?

SHORTS and REMNANTS

By M. L. D.

What Is a Mint Julep?

At this season of the year we are particularly impressed with "The Houghton Line's" definition of a mint julep: a depth bomb with a southern drawl.

◆

Natch!

"Thank you for your letter regarding our request to reprint the fourth article in a series entitled, "Cotton Warp Sizing." It is our plan to offer to this list reprints of outstanding articles which have appeared in textile trade papers. Naturally we want to include an article from TEXTILE INDUSTRIES."

WILDRICK & MILLER

New York City

◆

Crystal Ball Department

"We believe present dip in production and sales is short-lived. Present buyers' strike will be history over six-month period. Converters are working harder toward styling and though average woman resists discarding old wardrobe, she will do so to follow style, creating more business within the next year.

"Industrial production will not rise to 1943 high, but will level off at point between 1943 and present. Do not expect early return to seller's market, but look for firms that use aggressive selling policies and methods of showing plants how and where savings can be made to be less affected.

"Mills and finishing plants are becoming more and more cost conscious. Do not expect textile plants concertedly to follow presidential recommendation to reduce prices, but prices will be reduced through normal supply and demand cycle. Note difference between concerted effort to follow governmental suggestion and normal reduction of prices. The reduction in prices when passed to consumer will stimulate buying.

"We are not discouraged by present dip, and looking at overall picture of textiles believe return to normalcy will be beneficial to all concerned. Note page 113 of May 1947 issue TEXTILE INDUSTRIES. Note page 140 of May issue "Industrial Marketing."

TEXTILE INDUSTRIES

◆

Are You Older?

How many mills can lay claim to being older than the Nashua Mfg. Co., Nashua, N. H., which celebrates its 124th birthday this summer?

◆

Wants Book on Cost Control

"Belonging to a firm that subscribes to your magazine, I would appreciate very much if you can supply me a list of books relating to costing, cost accounts and cost control for cotton spinning. . . . "

A. H. THOMPSON.

Alabern Fabrega y Cia, S. A.,
Rosario, Argentina.

The Sleuthing Department

"I have posted to you a sample of a piled rug and would like to know what type machinery this rug is made on.'

E. A. HOPKINSON.

Pacific Cotton Mills,
Los Angeles, Calif.

"I am enclosing a sample of thread. Can you advise me where this thread can be obtained?"

F. A. HANUSEK.

Charlotte, N. C.

(Answers to such questions seldom go out the same day.)

◆

Drum Spreaders

"The writer was very much interested in an article regarding drum spreaders on page 63 of the March issue of TEXTILE INDUSTRIES. Will you please advise who the manufacturer of this spreader is, or where we can get further information about same."

WALTER BALDWIN.

Superintendent,
Penn Worsted Company,
Philadelphia, Pa.

(Columbia Supply Co., Columbia, S. C., is the source of this drum spreader . . . former advertisers we will welcome back any time.)

◆

Loom Fixing

"I have read with interest the series of articles on loom fixing by Ben H. Crawford and would like to obtain copies of them in booklet form. . . . "

ROBERT L. BEARD.

Tennessee Eastman Corp.
Kingsport, Tenn.

"We are very interested in the series of articles on Draper Loom Fixing as well as the series entitled "OLD-TIMER" appearing in your magazine. . . . "

ARMAND A. H. MAU

Supt. Donahue Corp. of Canada.
St. Hyacinthe, Que.

"We have a loom fixers' class, and would be greatly interested in obtaining these articles in book form, and otherwise we should like to have reprints (30 sets) for our classes. . . . "

A. F. KNIGHT

Gen. Supt. Cosmos Imperial Mills, Ltd.
Hamilton, Ont., Canada.

(The Crawford series on Draper Loom Fixing will definitely be reprinted in booklet form. Readers will be notifed when the book is ready for distribution.)

◆

412,755 Miles for Shuttle

"Cotton Chats" (Dec. 1946) of Draper Corp. has a photo of a shuttle from Naumkeag Steam Cotton Co. that was in continuous service from 1923 to 1932—roughly 33,000 working hours. A rough estimate of the distance traveled across the lay would be 412,755 miles and all we can say is that Henry Lussier, loomfixer, and the shuttle as well were "in the groove," and it's a fine record.

◆

Absorbent Cotton Machinery

" . . . Kindly advise us as to just where we would be able to purchase complete equipment for producing absorbent cotton or where we could secure the various machines. . . . "

EVERARDO SPENGLER

Maquinaria Industrial de Torreon,
Torreon, Coah. Mex.

"there goes another one, Dad!"

Yes, you see them everywhere! Mathieson's tank cars really get around as they speed millions of gallons of dependable Mathieson chemicals to our hundreds of customers throughout the chemical-consuming industries.

Mathieson transportation equipment also includes super-insulated Mathieson Dry Ice cars . . . multi-unit Chlorine Gas tank cars holding 15 one-ton containers (a method of delivery originated by Mathieson) . . . drums, barrels, containers . . . Ammonia, Chlorine and Carbonic Gas cylinders.

Modern transportation equipment helps maintain Mathieson's reputation for making prompt deliveries of the best in chemicals. *The Mathieson Alkali Works (Inc.), 60 East 42nd Street, New York 17, N. Y.*

Mathieson
CHEMICALS

Caustic Soda . . . Soda Ash . . . Bicarbonate of Soda
Liquid Chlorine . . . Chlorine Dioxide . . . Ammonia, Anhydrous & Aqua . . . HTH Products . . . Fused Alkali Products . . . Synthetic Salt Cake . . . Dry Ice . . . Carbonic Gas . . . Sodium Chlorite Products . . . Sodium Methylate

Textile Industries

JULY
1947

Are We Willing to Work for Peace?

AMERICAN people *wish* for peace, but how hard are they really willing to *work* for it? Peace can never be established or maintained by wishful thinking so long as there are powerful nations headed by greedy, rapacious governments. It takes work and hard work to win and keep the peace.

In 1914, after many years of preparation, the Imperial German Government saw fit to seize upon a trifling excuse for starting a general European war, which later developed into a world war. This war found the United States, as usual, totally unprepared to take any hand in the hostilities, a fact upon which the Imperial German Government had heavily counted in its plans for conquering Europe, and later the world, including us.

After three years of bitter Continental warfare, it finally became reasonably apparent to all but the most fanatically peace-minded of the American people that if the Germans won, our days of peace, and perhaps of existence as a nation, were numbered, and we belatedly got in the war and by breaking the stalemate between the evenly matched European forces, brought it to a successful conclusion.

Having done this much, we loaded up our soldiers and blithely brought them home, leaving Europe to straighten out its mangled affairs as best it might. For years thereafter, the people of the United States firmly and consistently refused to take any serious interest in what went on in Europe—completely ignoring the fact that the conditions which drew us into the First World War would inevitably force us into any subsequent war of extensive proportions.

During the years after the First World War and up until the beginning of the Second, the American people resolutely refused to *work* for peace. They wanted peace and were anxious to enjoy it, but insistent that other people bear the burden of insuring it. Peace is not insured so easily nor painlessly. The ruins of the First World War had not been cleared away before the losers were plotting war again, and when Hitler gained control of Germany in 1933, he found conditions made to order for fomenting a war in which he hoped the "decadence and stupidities of the democracies" would permit Germany to gain control of the world, a control which modern weapons could maintain for a thousand years or more, as Hitler so proudly boasted.

In the beginning, Hitler was weak, and shrewd bluffs were his weapons. Any real desire on the part of the people in this country, England or France, to suppress the menace of German militarism could have been easily successful and at small cost. The will to *work* for peace was lacking. The general view in this country was that it was none of our business, and that European nations must settle their own squabbles without embroiling us in them. As if that could be done! We had been inevitably drawn into the First World War by forces beyond our control, and even the most ardent American advocate of peace, if he possessed a modicum of intelligence, must have known that we would be just as surely drawn into the next conflict.

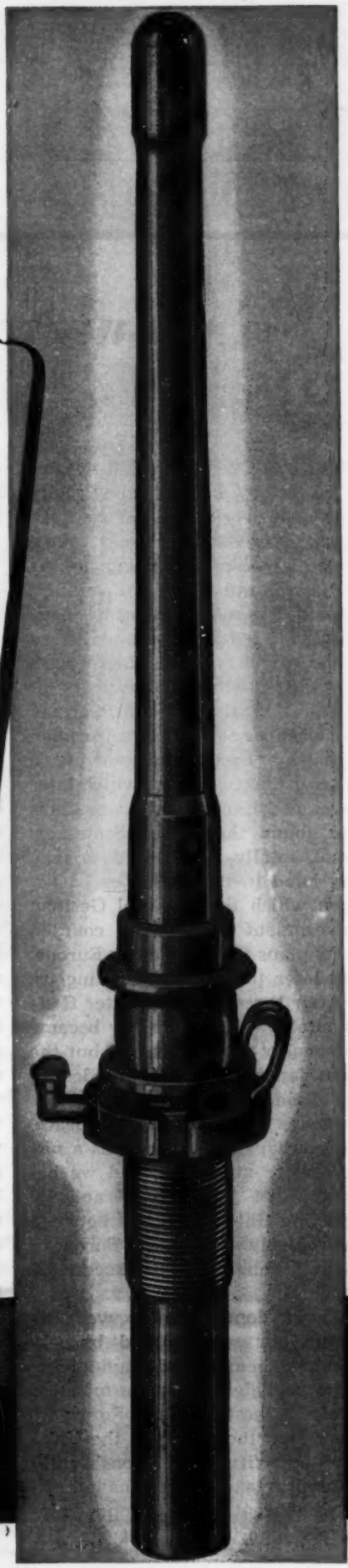
There was no secret about the Hitlerian aims, and a voluminous book had been published setting these forth in considerable detail. To emphasize the seriousness of these plans described in *Mein Kampf,* Germany immediately began to rearm on an enormous scale, and even the most obtuse diplomat, or so-called statesman, must have known that no people would make the sacrifices the Germans were making for rearmament unless they had the firm intention to use these armaments for conquest.

Yet all during the period of German rearmament our own politicians, far more concerned with their own maintenance in office than the maintenance of peace, refused to take any unpopular action, such as seriously warning the

Is four hours' work a week too great a sacrifice for a free people to make to preserve their freedom?

Marquette
ROLLER BEARING SPINDLES
with FULL-FLOATING FOOTSTEP BEARING

. . . insure continuous operation and reduce your costs. The standard Marquette cotton spindle, equipped with aluminum adapter (as illustrated) for use with paper tubes, has been giving satisfactory service for seven years.



Write for illustrated catalog

m Marquette METAL PRODUCTS CO.
CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Manufacturers of: HYDRAULIC AND ELECTRIC WINDSHIELD WIPERS • FUEL OIL PUMPS
HYDRAULIC GOVERNORS FOR DIESEL ENGINES • ROLLER BEARING TEXTILE SPINDLES
AIR COMPRESSORS • PRECISION PARTS AND ASSEMBLIES

Southern Representative: Byrd Miller, Woodside Bldg., Greenville, S. C.

American people about the inevitability of the approaching war unless we headed it off. We *could* have headed it off if our inadequate leaders had been willing and able to arouse us to the necessity of doing so. There is overwhelming reason to believe that Germany would never have started the late war without the firm conviction that the United States was so weak militarily that the war could be won before we could prepare for entering it. Only the miracle of the RAF defense of England and some unexplained blunders on the part of the German Staff caused their calculations to go awry, and that this country was saved from a German conquest about 1942 was due to good luck rather than to any willingness or determination on our part to work for peace.

We are apparently today as unwilling as ever to actually do anything to maintain the peace. Our attitude seems to be that "Peace is fine if it doesn't cost anything." Yet, as a result of the niggardly denial of a modest outlay for the preservation of peace after the First World War, we spent approximately 340 billion dollars in the late war, which was chiefly made possible by our own indifference to the forces which generated it.

We were just about as indifferent to the machinations of the Japanese as to those of the Germans. At the time when the approaching war between the United States and Japan was a matter of common street-corner talk, our government was sanctioning the sale of scrap iron, oil, and other military necessities to the Japanese. We recall remarks made by two junk dealers in widely separated sections of the United States, both to the effect that we were foolish to be shipping this scrap iron abroad for the Japs to shoot back at us.

Today, war threatens again, and are we really willing to work to prevent it, or are we just going to sit wishfully by as usual until it creeps up on us, and perhaps this time overwhelms us? In the next war, there will be only one nation powerful enough to dream of challenging us, and there will be no nation strong enough to stand between us and destruction as on two previous occasions. If we want peace, we must quit just dreaming about it and start to work for it.

Peace can never be established or maintained by wishful thinking so long as there are powerful nations headed by greedy, rapacious governments.

For the American people to really be willing to work for peace may require a type of inspired national leadership far different from anything we have had for many years. We certainly lacked it during the recent war when, generally speaking, practically nobody was willing to contribute anything to the war. Everybody wanted to get something out of it. Many of the workers in the war plants were not there from any sense of patriotic duty, but because the wages were higher than elsewhere, and these workers were willing to strike at the drop of a hat at the slightest suggestion that they dig in and work for the war and forget about the wages. The spirit is the same today, and it is going to take an aroused national leadership to awaken the people to the urgent necessities of the times.

Congress is just planning the elimination of our International Propaganda Service which tries to tell the peoples of the world who know nothing but tyranny and oppression, something of the American way of life. The cost of this is pitifully trifling and the benefits can be enormous. We have recently seen the unhappy spectacle of vigorous objection to helping out some of our starving friends in Europe when they are faced with the bitter alternative of submission to our prospective antagonist in the next war if we do not help them. The cost of this help is negligible if the American people really *want* to help.

We are bickering constantly over the question of maintaining a fairly decent armed force, and there has been violent argument about the question of Universal Military Training, which is an inescapable necessity if we want peace. The cost of these things will be trifling, if we really want them. It is estimated that the cost of a satisfactory peace program might be some 15 billion dollars a year. There is little doubt that much of this will be wasted in the customary manner that armies and navies waste everything, and perhaps if a little more efficiency could be developed in the use of the money appropriated for peace, less of it might be needed, but when the alternative is either to *work* for peace or to sit supinely by and await destruction, there can be only one choice. Perhaps if we make our choice wisely and vigorously, our prospective antagonist might be more willing to listen to reason while there is yet time for reason, and assist in making the United Nations a going concern and abandoning grandiose schemes of future conquest based on the assumption that we will always be the same saps that we have been in the past and wait, like sitting ducks for the fowler's gun.

It is estimated that the 1947 income of the American people will be about 170 billion dollars, and we will work on an average of about 44 hours a week to produce it. To produce the extra 15 billion dollars required for our adventure in the establishment of peace, we would merely need to work 48 hours instead of 44. *Is four hours' work a week too great a sacrifice for a free people to make to preserve their freedom?*

If we are unwilling to pay for peace out of our present income, large as it is, we could pay for it by merely working a little longer each week if we think peace is really worth *working* for.

By doing this, we would in no wise impair our standard of living, but only slightly reduce our standard of loafing.

At the very founding of this government, in his first annual address to both Houses of Congress, on January 8, 1790, President Washington said,

> "To be prepared for war is one of the most effectual means of preserving peace."

We have frequently forgotten this great man's prudent admonition, and forgotten it to our cost.

Training Card Grinders

By A MILL SUPERINTENDENT

DAILY CARD GRINDING		Check
SETTING		
Doffer—Cylinder	7/1000	
Flats—Cylinder	10/1000	
Lickerin—Cylinder	7/1000	
Feed Plate—Lickerin	10/10	
Doffer Comb—Doffer	22/1000	
Screen Back	17/1000	
Screen Bottom	68/1000	
Screen Front	3-16"	
Front Plate Top	29/1000	
Front Plate Bottom	17/1000	
Back Plate Top	29/1000	
Back Plate Bottom	34/1000	
Lickerin Screen	34/1000	
Mote Knives Close as Possible Top	12-	
Mote Knives Close as Possible Bottom	10-10	
Flat Comb—Flats	22/1000	

CARD NO.

DATE

GRINDER

FOREMAN

NEW PARTS USED

CLOTHING

Good	Fair	Bad

REMARKS:

An outline showing the duties of a grinder is given in Table 1. The card grinding routine is given in Table 2. The card grinder's settings and report form is shown in Fig. 1 (above).

CARD GRINDING ROUTINE (TABLE 2)

1. Take rolls off No. 1 card and put on No. 3 card, which has been prepared for grinding by third shift man.
2. Put No. 3 to grinding.
3. Cut feed out of No. 4 card and have stripped.
4. Set No. 1 card all over. Oil and start up.
5. Put No. 4 to grinding with rolls taken from No. 2. Leave grinding over to 2nd shift, when it will be stopped. This will be first card to be set up the following day.
6. Cut out feed and have No. 5 stripped.
7. Set flats and front on No. 2; oil and start up.
8. Put card No. 5 to grinding with rolls taken from No. 3 This will be the second card the following day. It will grind on 2nd shift.
9. On No. 3 card set the following: Doffer to cylinder, comb to doffer, top and bottom front plate, check feed plate to licker-in. Oil and start up.
10. Mark card No. 6 for 3rd shift man to prepare for grinding.
11. On the next round No. 2 card will be the card to set all over. No. 3 will be the card on which to set flats and front; and No. 4 will be card on which to set the front.
12. On 3rd round No. 3 will be card to set all on and so on.
13. On card setting slip check settings made and make settings as shams.
14. Sign slip and turn in to your foreman.

RECENTLY we have heard such comments as this, "My carding is bad—can't get the grinders like we used to have."

Why not train? It has long been our contention that an overseer of carding could train a man to grind cards about as quickly as he could find out whether or not a "strange grinder" was satisfactory. We also contend that it can be done with just about as little effort. The writer has worked in five different card rooms and has had carding under his supervision for some 15 years, and he has yet to hire an outside grinder.

Train Within Organization

We definitely feel that a grinder can be trained more successfully than trying to hire or find the so-called expert grinder. After all, what is so mysterious about this thing called grinding?

It is true that card grinding is an important operation and a person must have considerable knowledge of the carding machine, its functions and working mechanisms, along with certain mechanical skill, and a sense of gauging accuracy before he can grind cards properly; but with planning and follow-up, any organization

DUTIES OF CARD GRINDER (TABLE 1)

1. Care and maintenance of grinding rolls.
2. Cover traverse grinding rolls every 10 cards.
3. Cover drum grinder every 30 cards.
4. Do belt work and repairs on 45 cards.
5. Take out and clean one back and one front screen per week.
6. Clean and dress card belts on 45 cards once per week.

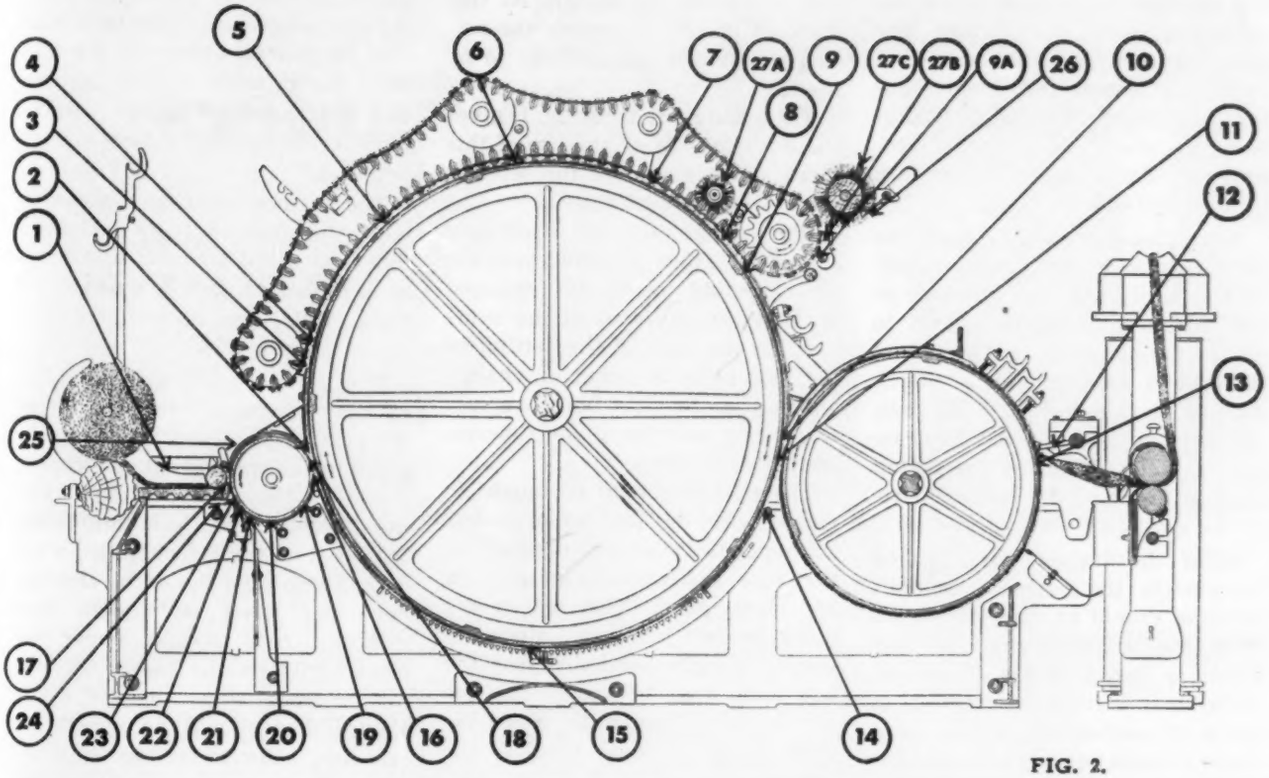


FIG. 2.

OPERATION OF CARD (FOR TRAINEES) TABLE 3

1. Lap guide. Controls the edge of the card web.
2. Lower back plate. Controls the air currents, which in turn affect the licker-in fly.
3. Upper back plate. Regulates air currents and affects the loading of flats.
4, 5, 6, 7, 8. Flat setting points.
9. Upper end of front plate.
9(a) Flat stripping comb; care should be exercised in setting so that comb will not rub flats. If set off too far, will not strip flats.
10. Lower edge front knife plate. Controls air currents, which affect distribution of cotton on cylinder.
11. Doffer to cylinder. Doffer takes cotton off the cylinder.
12. Stroke of doffer comb. Lower edge of comb at bottom of stroke should fall on a line drawn between center of doffer shaft and center of comb shaft.
13. Comb to doffer. Set so as to avoid loading of doffer. Too close will cause neps and leaf, as well as short fibers, to go into stock.
14, 15, and 16. Cylinder screen to cylinder. Affects air currents, which control amount of fly removed.
17. Feed plate to licker-in. Very important. Always reset after unchoking card.
18. Licker-in to cylinder. Always examine for damaged teeth. Look for chokes in licker-in shrouds.
19, 20, and 21. Licker-in screen. Controls fly from licker-in. Make settings by use of shrouds or special gauge.
22, and 23. Mote knives to licker-in. If set too close, may cause loss of good cotton.
24. Angle of mote knife to licker-in. Use angle gauge.
25. Licker-in cover. Always keep securely fastened.
26. Hackle comb. Set so as to allow points to go ½" below surface of bristles.
27(a), 27(b), 27(c). Brushes. Keep clean and set. They are important.

can train from its present employees men who can properly do the job of grinding.

First of all, the selection of a proper type person to train as a grinder is of utmost importance. The person should be physically able and of the proper temperament. He should be patient and reliable. He must be one in whom we can have confidence. Remember, it takes almost as long to check a card as it does to set it.

Now that we have selected the man, we should talk over the danger points of the card and show the trainee the safety precautions to take in performing the hazardous operation of grinding. Keep in mind safe practices in all respects: Avoiding personal injury, injury to other employees, damage to the clothing, to the machine, but most of all emphasize the trainee's personal safety. This is a responsibility that the overseer of carding should never delegate; he should do this himself.

He should not only personally instruct the trainee, but he should follow up day after day to see that the trainee is following instructions. Also, he should make sure that as the trainee progresses he is not growing careless as he acquires skill and confidence. It is more often the old grinder that loses a hand or a finger—not the novice.

The next step is to teach the trainee the grinding routine and the duties of a grinder. Good card-

ing depends to a great extent on having a systematic routine. The grinding must be arranged so that cards are ground and set at regular and proper intervals. Therefore, we should keep proper records of dates when cards are ground and set.

The trainee should next be taught the different setting points of the card, and the function of the different parts. It is well to let the trainee study the card and then have him submit a sketch such as shown in Fig. 2. He does not have to be an artist to draw such a sketch. Drawing the sketch fixes in his mind the various parts of the card like nothing else will.

After the trainee has finished his sketch, the overseer or shift foreman should go over the sketch with the trainee, marking the points as shown in Fig. 2 and explain their control or relation to the work performed by the card. Table 3 could be used as a guide.

Now the trainee should be taught the use of the emery. The entire success of grinding depends on the proper use of the grinding fillet. To begin with, grinding fillet should not be run after it has passed its usefulness. When the emery fillet is new, due to the grooves in the fillet and the sharp edges of the grain, the emery works down between the wires, giving the required action on the wire. With usage these grains become rounded and the grooves in the emery fillet disappear and merely polish instead of grinding.

The grinding rolls should be set to produce the same hissing sound equally across the width of the card, getting a light spark. The same applies to the flat grinding roll, but be sure to avoid the spark and set somewhat lighter. It is a very good idea to have the trainee's hearing checked, otherwise he may not be able to set his rolls properly.

The trainee must be checked often as to his setting of the grinding roll. He is likely to grind too heavy at first, and then after he has hooked the wire on one or two cards he is likely to grind too light.

The trainee has already had the setting points of the card pointed out to him on his sketch. At this stage, it is well to review the setting points and the settings to be used.

The grinders report (Fig. 1) gives these settings. With the use of this blank, the trainee has the settings before him at all times.

The gauge to use (settings) should be fixed by the overseer; these should never be changed without the approval of the overseer. In the case of the setting of the feed plate to licker-in, change only on approval of both overseer of carding and the plant superintendent.

The trainee should be taught to gauge with his left hand, unless he happens to be left-handed. In that case, teach him to gauge with his right hand. The reason for using the left hand for gauging is that on a right handed person the left hand will be more sensitive to the pull of the gauge. Since the right hand is used to pull the wrench, it is not as likely to detect the finer differences in pull. Of course, all settings cannot be made with left hand, and the trainee will have to use his right in such cases.

All settings should be made by "backing off;" that is, the setting should be drawn in too close and then backed off to correct gauge, making the final adjustment with the inside nut. In this way the strain on the setting rods is always away from the surface set to. Also, by setting in this manner the settings will withstand vibration and shock much better.

In setting the flats the trainee should use two trowel-shaped gauges, a 10/1000 to set with and a 7/1000 to check with so as to insure against flats "facing"—rubbing. Also, it is a good idea to crank the flats forward one point and check so as to insure clearance all the way around.

Here a word of caution should be given to the trainee in regards to the gauges. Leaf and flat gauges are very thin and are easily damaged. When these gauges become bent, dented, rusted, etc., they are of little use in securing accurate settings. After each use the gauge should be wiped off with a clean oily cloth and kept in the tool box in such a manner as not to be bent or dented by coming in contact with other tools that may be thrown loosely in the tool box. Many mills furnish gauges and hold periodic gauge inspections, replacing any faulty gauges found.

The trainee must be impressed with the fact that the grinding rolls are precision tools and must be regarded as such. In many mills these rolls are abused through rough handling.

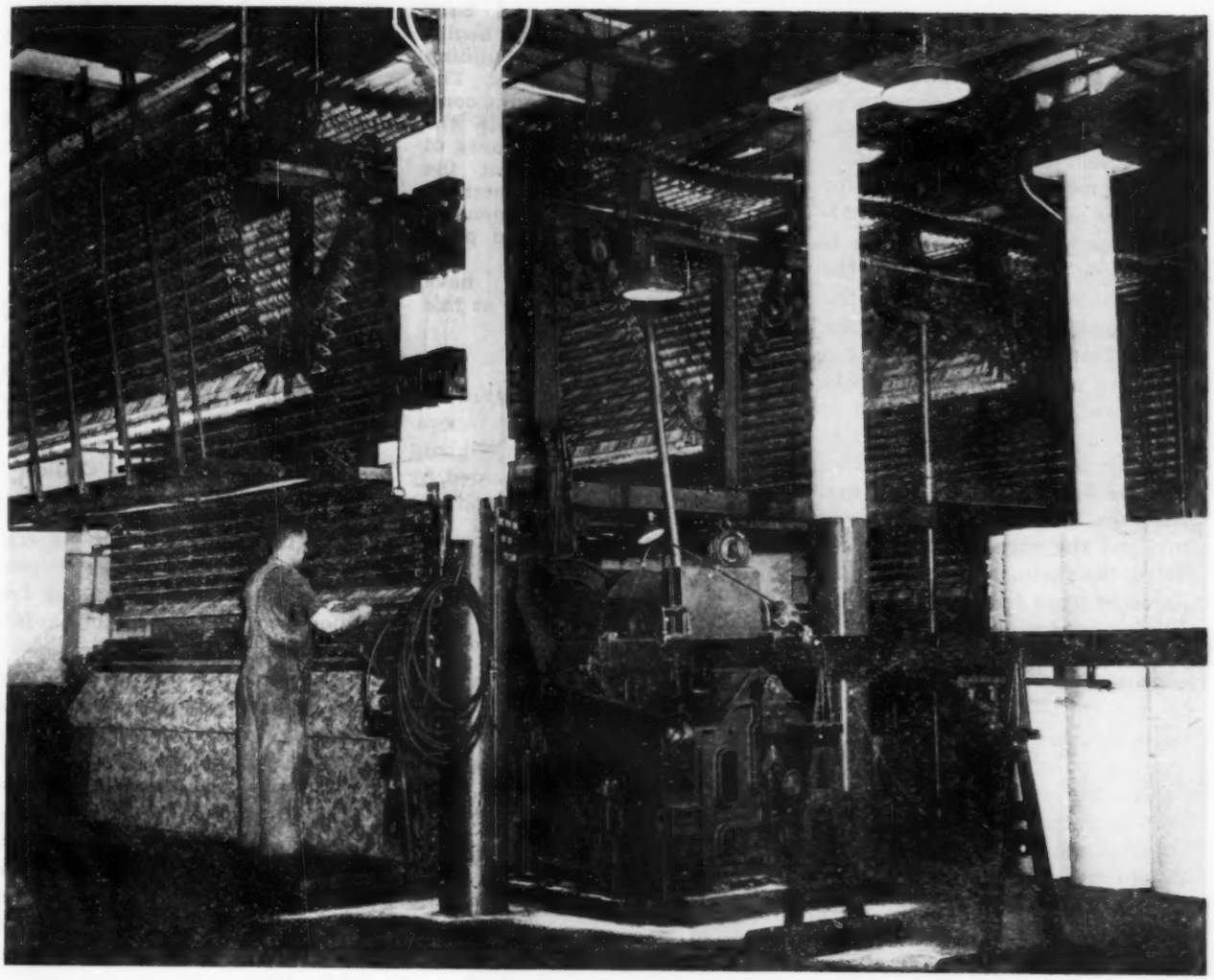
The surface to be ground takes its shape from the member doing the grinding, and any deformity in grinding member will be reproduced on the surface ground. For this reason the grinding rolls should at all times be handled with care. These rolls should be cleaned once per week and oiled. The grinding rolls should never be oiled while on the cards. Oil before putting them on the card. Emery dust should be wiped off and not allowed to accumulate, otherwise the rolls will suffer and wear.

From now on, in the training of card grinders, it is a matter of follow-up on the part of the foreman and overseer. The trainee cannot be expected to know all the causes and remedies from the beginning, but by the overseer's listing causes of defective carding, showing these to the trainee, and prescribing the corrections to be made, the trainee will develop with time and practice. The trainee should be taught to observe the cards ahead of his grinding rolls and note defective carding, and plan to make the corrections as he comes to the card for the regular grinding. Of course, if it is something major, the card should receive immediate attention.

The trainee should be taught to look over the clothing closely each time the card is ground and report any clothing defects to his foreman. This will enable the overseer to plan his reclothing program.

Good carding is a matter of attention to details, experience, and judgment.

Grinders can be taught. After all, they don't just happen to pick-up the skill and experience and knowledge.



Instrument Control

Feature Processing at Carpet Mill

Photographs furnished by Brown Instrument Company

IN THE PRODUCT control laboratories of Alexander Smith and Sons Carpet Company, Yonkers, N. Y., process efficiency is being constantly checked. Wool scouring is controlled by metering the pH of scouring bath samples, with recording instruments suitable for process application. Such tests as color fastness, twist, tensile strength, abrasion, and wear are conducted in the physical testing division of these laboratories under automatically controlled humidity and atmospheric temperature.

The research division likewise includes an air-conditioned area in which humidity and atmospheric temperature are automatically controlled. These conditions are chart recorded by a combination thermometer-hygrometer.

A phase of the research program is the operation of a pilot plant where tests and experiments are conducted on actual process equipment. One unit utilized is a conditioner in which yarn is subjected to vapor-laden air maintained at predetermined temperature and humidity by a recording two-pen thermometer controller. This instrument continuously records the temperature and humidity of the chamber and automatically regulates air pressure to diaphragm valves controlling the variables mentioned.

The manufacture of some "velvet" carpet involves the use of printed yarns, so called because

of the manner in which the dye is applied to the yarn. To prepare for the dyeing, multiple ends of yarn are wound onto a large drum type reel, the ends spaced so that individual skeins result. A traverse mechanism provides for even yarn surface across the winding. After the desired yardage is wound, the ends are tied and the reel is rotated slowly while the dye is applied in alternating color bands. This is accomplished by a small dye pan mounted on wheels.

A wheel, partially immersed in the dye pan, applies the color to the yarn as the pan passes from one side of the reel to the other. After the reel has completed one turn and the yarn dyeing is completed, the skeins are removed and placed in trays for steaming to set the dye permanently in the wool fibers and also to set the twist in frieze or caracul yarn. The temperature of each steaming chamber is automatically controlled and recorded by a recording thermometer controller.

In operation, after the yarn is placed in the steamer chamber, the predetermined steaming time is set on a time cycle instrument. When the steaming interval is begun, this instrument commences timing and a signal light indicates operation. At the end of the desired cycle the signal light automatically goes out, indicating to operators

Alexander Smith and Sons Carpet Company had its beginning in 1845 in a small building housing 25 hand looms. The success and progress of the company has been largely in the hands of direct descendants of the founder. Throughout the mill modern production methods are utilized, based on scientific research, laboratory, and process control practices.

Modern laboratories have been placed in operation at this plant.

that the yarn may be removed from the chamber. The temperature of each steamer throughout the production day is recorded by its corresponding thermometer controller.

Dryer with Controlled Temperature

After weaving, a special coating is applied to the carpet backing, which must be dried under uniform and accurate conditions. The dryer used is approximately 75 feet long, 30 feet wide, and 20 feet high; it handles continuous carpet 18 feet wide, or two nine-foot widths. It is comprised of three zones in series from end to end, and each zone is divided into two sections for equal distribution of the air stream.

Fin type blowers force the air through steam heated coils and then through ducts to a bank of slotted nozzles located above and below the moving carpet. The temperature of the air to the six sections is automatically maintained at the proper point by vapor filled recording and controlling thermometers with a temperature range of 100°F. to 300°F. The six instruments are mounted on a control panel as shown in the accompanying photo. Each thermometer bulb is located in the air stream approximately three feet from the coil heater of the section it is controlling.

Thermometers Control Critical Temperatures in Dye Houses

The dye house operations employ recording thermometer controllers. The chart records of dye liquor provide dependable reference for process analysis.

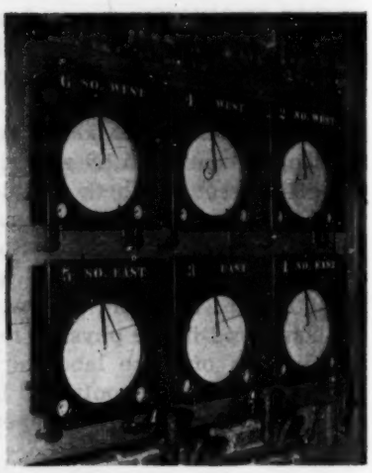
The dyeing is done in a battery of Franklin kettles and Hussong kettles. Either scoured wool or yarn in skeins is handled, depending on the type of material. The temperature sensitive thermometer bulb, immersed in the dye liquor, transmits the temperature to the controlling instrument, which in turn regulates the air pressure to the diaphragm valve on the steam intake line.

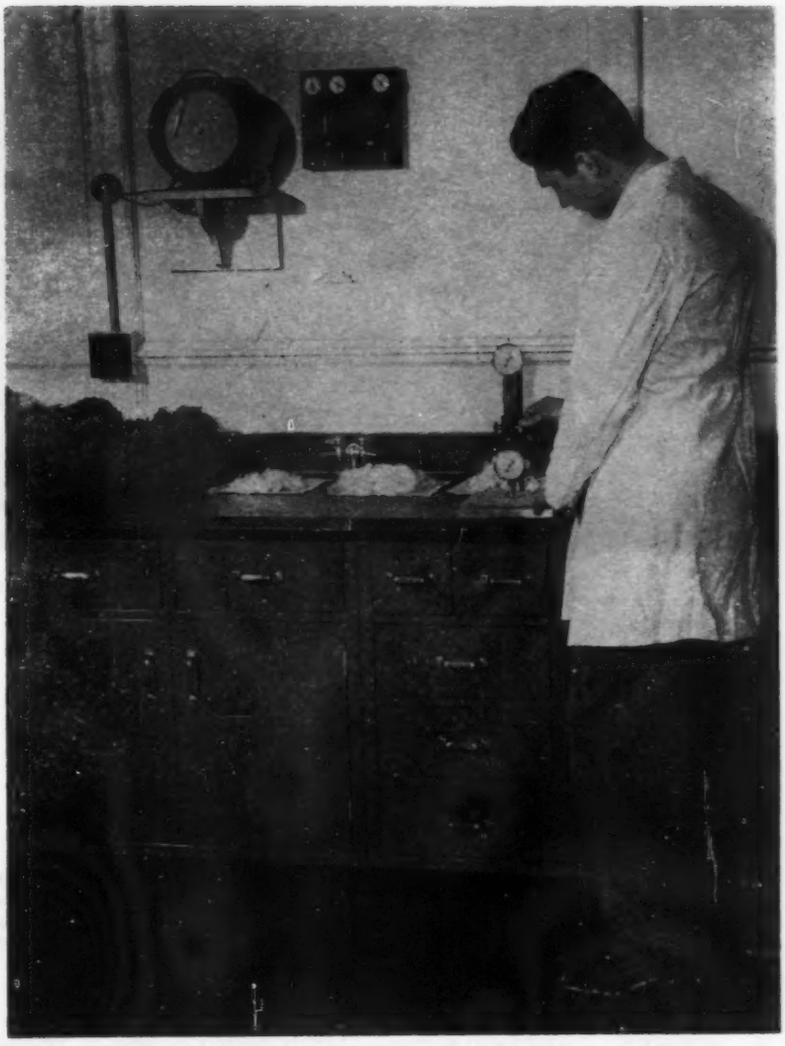
Power House Functions Recorded

The importance of chart records of power house operation is well demonstrated at this mill. The turbine room panel board incorporates flow meters to measure and record high pressure steam to tur-

Automatically controlled yarn steaming chamber.

Instrument panel board on regular coating dryer.





Temperature and moisture controls may be seen on the wall of this product control laboratory.

bine, low pressure bleed steam, and cold water to the condenser, as well as hot water to the velvet mill, hot water to the dye house, and hot water to the picker building.

Combination temperature-pressure recorders measure steam to boiler room auxiliary units, low pressure meter steam, and hot water to condenser. All flow meters involved are the integrating electric receiving type, which facilitates the location of the instruments on a central panel remote from the point of measurement.

The power house has eight boilers, each rated at 656 horsepower. Flue gas temperature, steam flow, and air flow are recorded on a three-pen combination thermometer and flow meter, while a thermometer measures the temperatures on the high pressure and low pressure ends of the header coming from all boilers. The total feed of water to all boilers is measured and recorded by a separate flow meter.

The steam generation and handling may be described as being divided into two parts, the first going directly to the turbo-generator, capable of generating 5720 kva. The second part passes through a reducing valve and is used directly in processing. The exhaust steam from the turbine then bleeds into a low pressure header supplying the processes. The instruments referred to provide constant chart records for analysis and accounting purposes.

Course in Research Offered at MIT

The Massachusetts Institute of Technology has announced a summer program in "Principles of Textile Research" for four weeks, beginning August 4 and continuing through August 29, 1947, under the direction of Professor E. R. Schwarz.

The program will include lectures and demonstrations, together with laboratory exercises, in the physical analysis of textiles.

In addition to a discussion of the fundamental principles involved in the techniques of textile research from the physical and optical standpoint, work will also be given in the presentation of data, report writing, and in the application of such statistical techniques as the analysis of variance, quality control, significance testing, and correlation analysis.

So far as possible, the material will be presented in a manner to be of interest and value to the teacher of these and allied subjects, to the laboratory technician, to the executive who must interpret such results for the benefit of his organization, and to the student who seeks an up-to-date orientation course in physical and optical analysis of textiles.

Tuition is $125 including a $5 registration fee. Minimum prerequisite requirements are high school graduation including physics, chemistry and mathematics through trigonometry. College training will be helpful.

Application should be made to Professor E. R. Schwarz, Room 3-309, Textile Division, M. I. T., Cambridge 39, Mass.

General view of Pepperell's dining room.

A Good Lunch Helps

A SYSTEM has been installed at Pepperell Manufacturing Company's Lindale, Georgia, plant whereby all operatives have a scheduled lunch period and are encouraged to utilize the modern cafeteria described here. Do the employees like it? Read this article and see for yourself.

A MODERN CAFETERIA was opened approximately one year ago to the 3000 employees at Pepperell Manufacturing Company's Lindale, Ga., plant, and something like 1800 hot meals daily have been served ever since. Do the employees like it? Well, they eat there, and the expressions on their faces indicate enjoyment. Some of the girls complain of difficulty with figure control, but none has expressed a desire to go back to quick snacks, soft drinks, bicarbonate, and aspirin tablets.

Scheduled Lunch Period For All Employees

A unique feature in connection with the operation of the cafeteria is that there is no more eating in the work areas or "getting someone to watch the machine while you grab a bite." Machinery is shut down by groups on prearranged schedule so that each employee's lunch period is free of plant duties. Thus the 30-minute lunch period is one of relaxation and rest. This arrangement alone eliminates considerable indigestion.

The plant operates on normal eight-hour work shifts, and the machine shut-downs are so scheduled that the cafeteria's comfortable seating capacity of 300 people is never exceeded. For example, 900 employees of the day shift eat between 10:30 A.M. and 12:30 P.M., but they do not all shut their machinery down at the same time. About 100 employees leave their work places each ten minutes—so that in about two hours 900 people have been fed (each having 30 minutes) without exceeding the 300 limit which is set by seating capacity.

The three serving periods are: 10:30 A.M. to 12:30 P.M., 5:00 P.M. to 7:00 P.M., and 2:00 A.M. to 3:00 A.M. However, the kitchen operates continuously. That arrangement obviates necessity for storing cooked food, thereby giving each customer a freshly cooked meal. In fact, most of the foods are cooked in relatively small batches as required, and all foods, including breads and pastries, are prepared in the kitchen—ice cream being the only exception.

Facilities

To best meet plant needs, a cafeteria has to be located at a central, convenient point in or near the mill so that employees can reach it quickly and have ample time for a leisurely lunch without overstaying the allotted time. In selecting the location for Pepperell's cafeteria this factor was considered, resulting in its being placed on the third floor of the dye house which is midway between the two main mill buildings.

As will be seen from the accompanying plan, the space allocated to the cafeteria as a whole is liberal. In fact, the storage, preparation, cooking, and service space looks all out of proportion to the eating room, but when consideration is given to the ten-minute scheduling previously mentioned, the reason for this becomes clear.

Even the most remote corners of storage spaces show evidence of

careful design and construction, with special emphasis on sanitation and minimum maintenance.

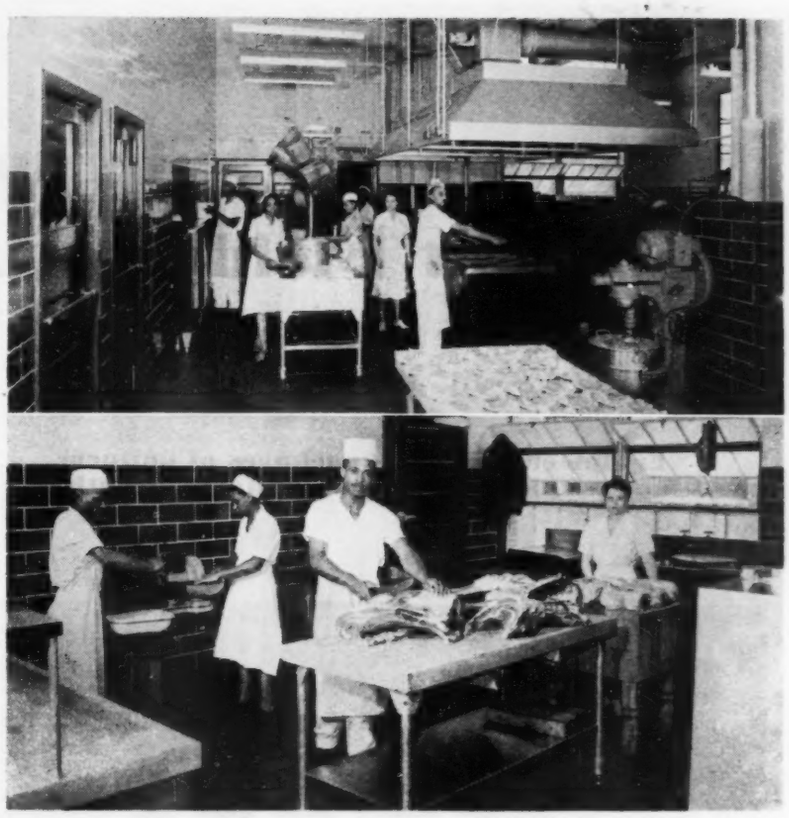
Prices are reasonable and the well-loaded trays show little indication of penny pinching. The colored employees have their own dining room where the same services and foods are provided.

Employees are encouraged to consider the lunch hour a recreation period. Smoking presents no objection because the eating place is air conditioned and the smoke goes out with the food odors. The whole plant is provided with music, and the loudspeakers in the dining room seem appreciated.

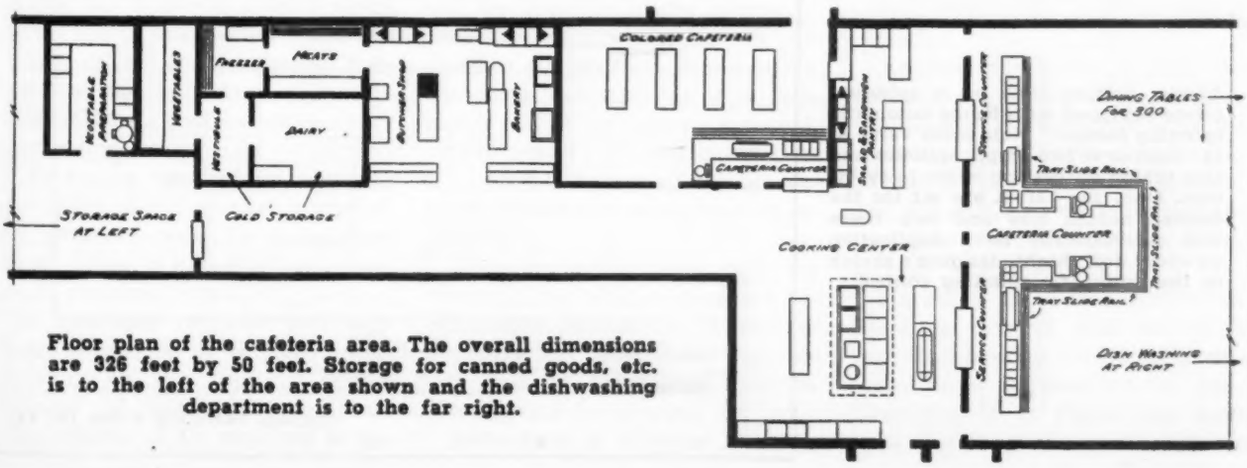
It is clearly understood that the primary purpose of the cafeteria is to give the employees opportunity to eat food in pleasant surroundings. Therefore, employees who prefer to bring their own lunches are encouraged to eat in the cafeteria and use the tables, water service, etc., without charge. A good many exercise this privilege. No rules have been necessary to eliminate eating at work spaces and in the aisles. The fact that now all eating is confined to the cafeteria has greatly improved sanitation in the work areas by eliminating improper disposal of food leavings, paper wrappers, etc.

The cafeteria costs the company some money, but management is not complaining. They seem to feel that it is money well spent and that the cost is more than offset by desirable results. Actually, it costs the worker an average of about 43 cents per meal and this is made possible by the company absorbing all overhead costs: equipment, lights, water, air-conditioning, etc. Right now the prices charged do not quite pay off the food and labor expense, but the management thinks they may break even when more experience is gained. Of one thing they are certain, however, there will be no letdown in quality; they will continue to buy the best of foods and cook and serve them properly.

If you insist on talking about details, the management will point out such benefits as 10% reduction in absenteeism, definite improvement in efficiency, better health records and higher employee morale. But they much prefer to simply say that they are very happy about their restaurant venture and let it go at that. They think the smiling faces and fellow employees enjoying a good lunch outweigh dollar and cents returns.



Upper photo, general view of main cooking center. Lower, the well equipped butcher shop.

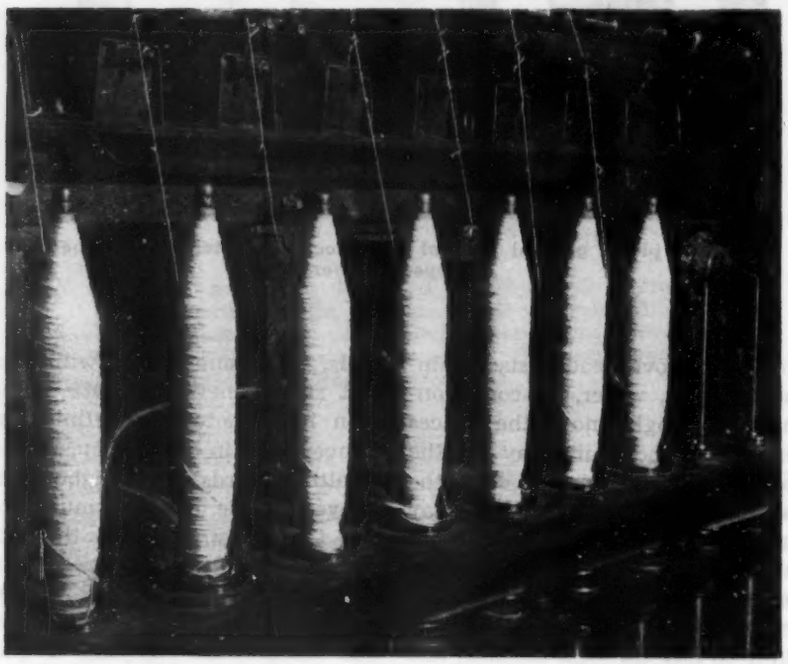


Floor plan of the cafeteria area. The overall dimensions are 326 feet by 50 feet. Storage for canned goods, etc. is to the left of the area shown and the dishwashing department is to the far right.

Automatic Spinning Control at Fieldcrest Mills

Staff Interview

Equipment produces packages of uniform size with tailings of uniform length.



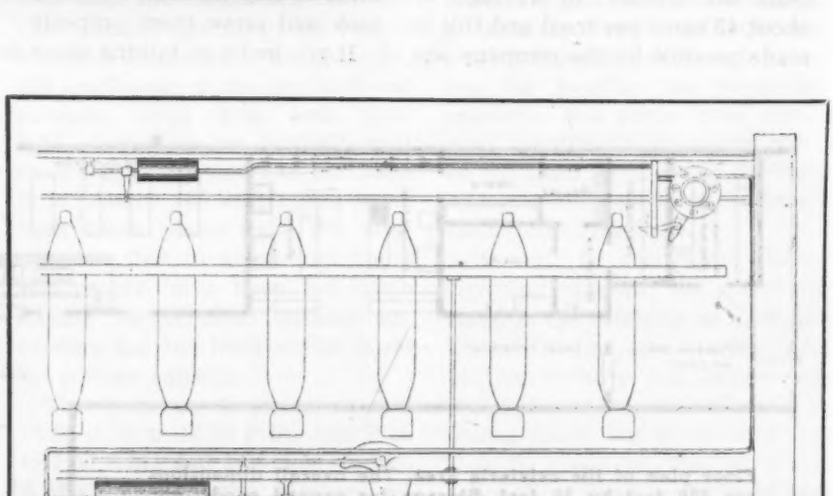
PACKAGES that are uniform in size and have tails of the same length are being produced in the Bedspread Mill of Fieldcrest Mills division of Marshall Field & Co., Spray, N. C. This has been made possible by installation of a new attachment on all spinning frames making filling yarn.

By referring to the accompanying illustrations, it will be seen that the new unit consists of one or two valves (depending on type of bobbin build), one or two cylinders (depending on type of drive), and tubing for connecting the valves and cylinders.

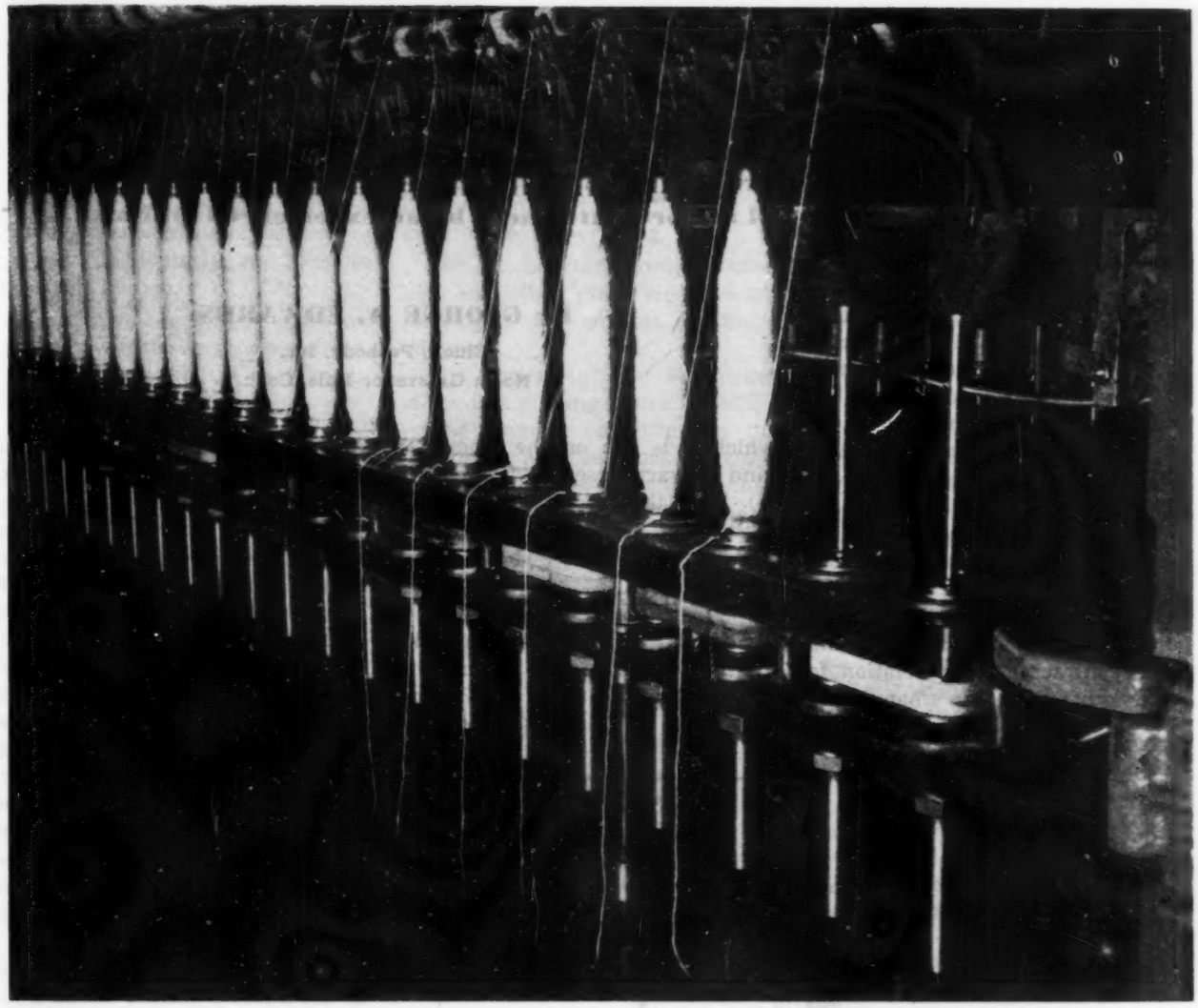
Operation

The main valve, which is tripped when the bobbins are filled to a predetermined size, is adjustable so that it will trip at the desired package size. This valve, when tripped, releases the flow of air to the cylinder, piston of which is attached to the traverse rod and in

Above, doffing time on a spinning frame equipped with Numo automatic spinning control. Note main valve at far right over two empty spindles and also tubing connecting valve to cylinders. Once the valves are set for the desired bobbin size and tail, there will automatically be a duplication on every doff. Right, designer's sketch of the automatic spinning control.



Courtesy, Numo Mfg. & Eng. Co., Inc.



Tailings of uniform length are produced on each doff. As the rail comes down for doffing, it trips a switch which is adjusted to stop the frame at a point which gives the desired tail length.

turn bears the rail down.

The speed at which the rail comes down is controlled by the speed control valve which is easily adjusted for the desired speed. As the rail comes down, it trips the stop switch which is adjusted to stop the frame at a point which gives the desired tail. Once the valves are set for the desired bobbin size and tail, there will automatically be a duplication on every succeeding doff.

To insure constant and reliable operation, it is said that minimum air pressure must be maintained at all times in excess of the minimum required operating pressure. The operating pressure will vary from around 20 to 40 pounds, depending on the type of frame, amount of weight, friction, etc. The volume of air required to operate each unit is said to be about one half cubic foot per operation.

Advantages

This pneumatically operated device automatically stops the frame and pulls the ring rail down without the attention of the spinner or doffer. It also pulls the rail into position for doffing; consequently the doffer can start his work from either end of the frame. A considerable amount of time is saved as a result of the use of the attachment, therefore, production is increased.

Those concerned only with the manufacture of yarn may not realize that uniformity in size of packages and tailings will increase the production and efficiency in the weaving department.

Regardless of whether the batteries are filled by the weavers or by battery fillers, tailings of the correct length enable the job to be done more rapidly since it is not necessary to do a lot of unwinding in order to get these tailings ready to wind around the thread holder after a bobbin has been pressed in place.

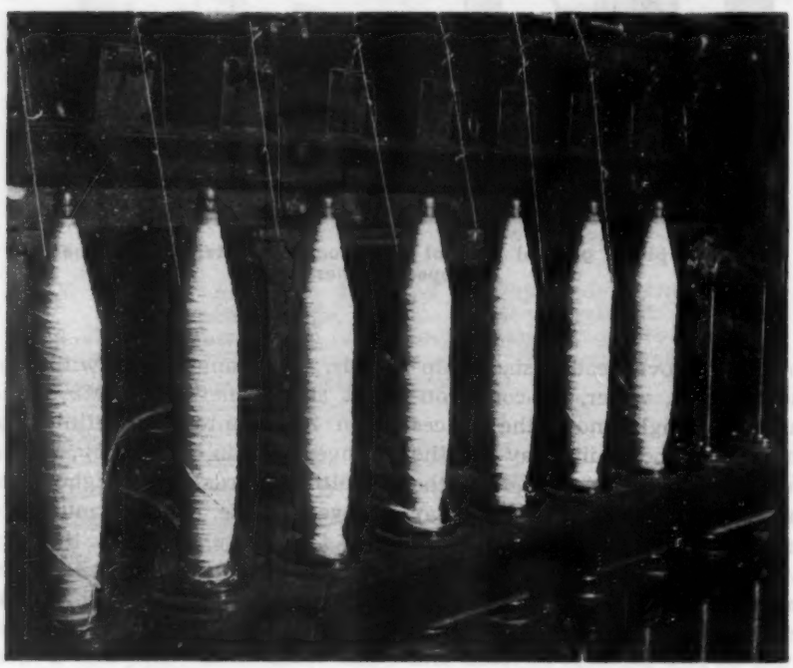
Another advantage is that the amount of waste is decreased since the packages are doffed with the correct tailing length already unwound for insertion in the battery. Tailing waste is expensive because the yarn has been through every process except weaving.

Marketed as Numo Automatic Spinning Control, this device is manufactured by the Numo Manufacturing & Engineering Co., Inc., Charlotte, N. C. Patent has been applied for.

Automatic Spinning Control at Fieldcrest Mills

Staff Interview

Equipment produces packages of uniform size with tailings of uniform length.



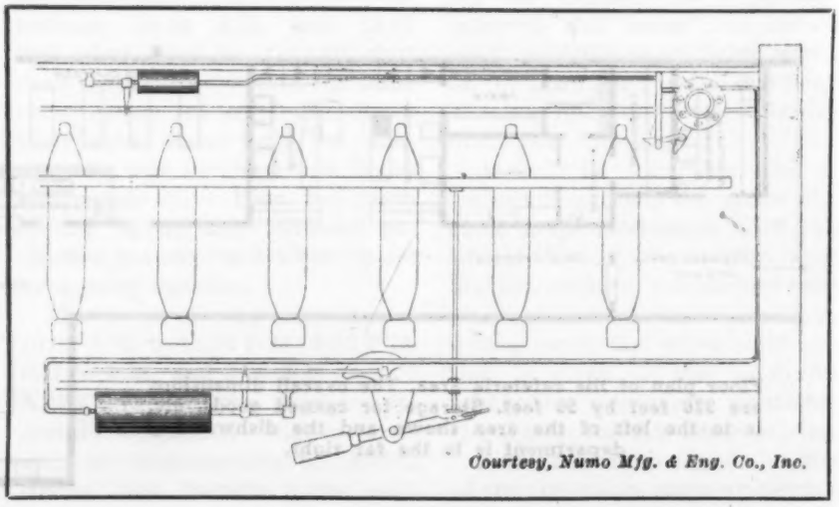
PACKAGES that are uniform in size and have tails of the same length are being produced in the Bedspread Mill of Fieldcrest Mills division of Marshall Field & Co., Spray, N. C. This has been made possible by installation of a new attachment on all spinning frames making filling yarn.

By referring to the accompanying illustrations, it will be seen that the new unit consists of one or two valves (depending on type of bobbin build), one or two cylinders (depending on type of drive), and tubing for connecting the valves and cylinders.

Operation

The main valve, which is tripped when the bobbins are filled to a predetermined size, is adjustable so that it will trip at the desired package size. This valve, when tripped, releases the flow of air to the cylinder, piston of which is attached to the traverse rod and in

Above, doffing time on a spinning frame equipped with Numo automatic spinning control. Note main valve at far right over two empty spindles and also tubing connecting valve to cylinders. Once the valves are set for the desired bobbin size and tail, there will automatically be a duplication on every doff. Right, designer's sketch of the automatic spinning control.



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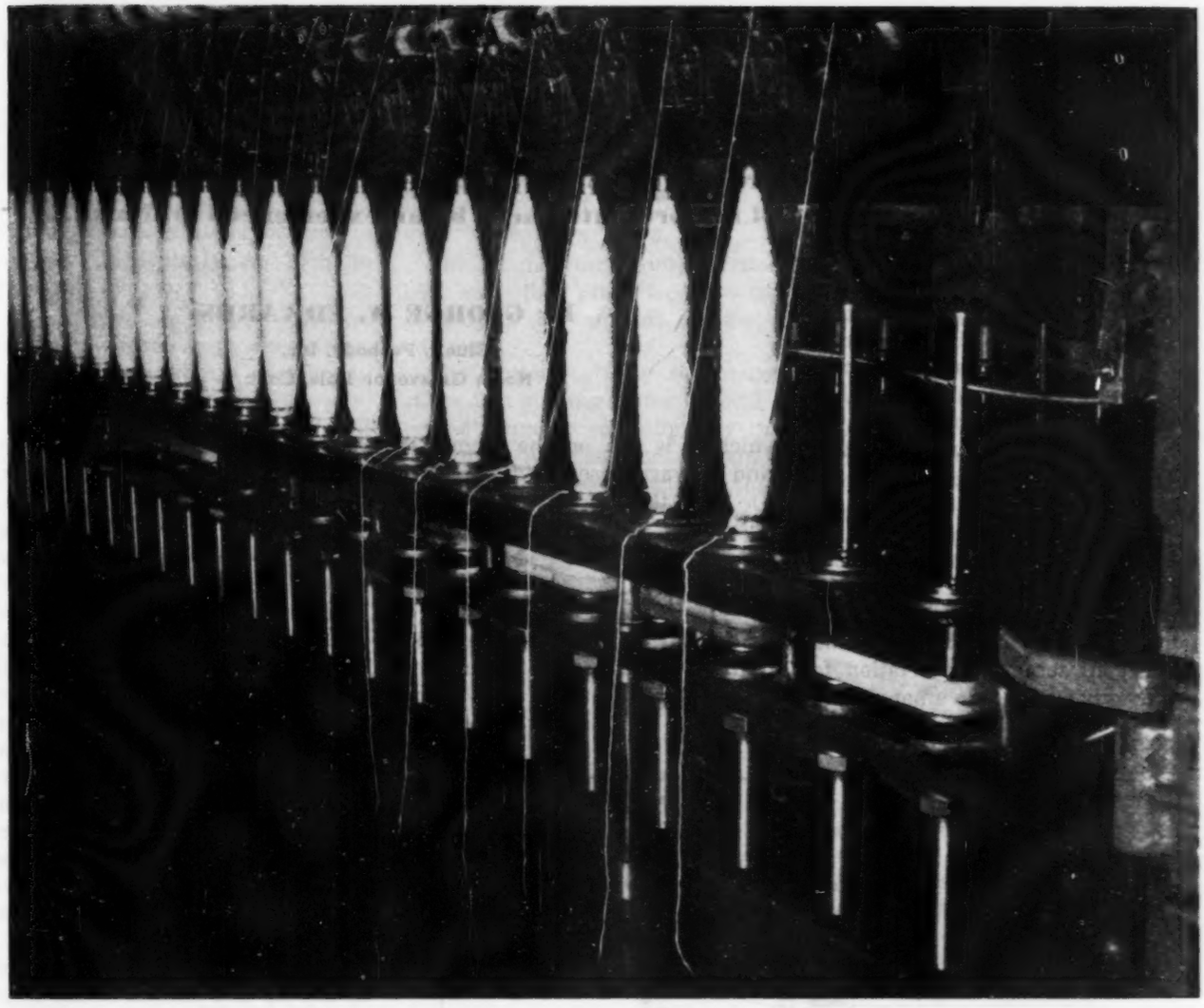

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Contraction in Seersuckers

Suggestions for its control are presented here by an experienced mill man.

By GEORGE W. EDWARDS

Cluett, Peabody, Inc.
North Grosvenor-Dale, Conn.

THERE HAS been much written about how to figure contraction in seersucker and other two or three beam woven fabrics, but there has not been enough written to describe what happens when the contraction is being made in the fabric or how to control it.

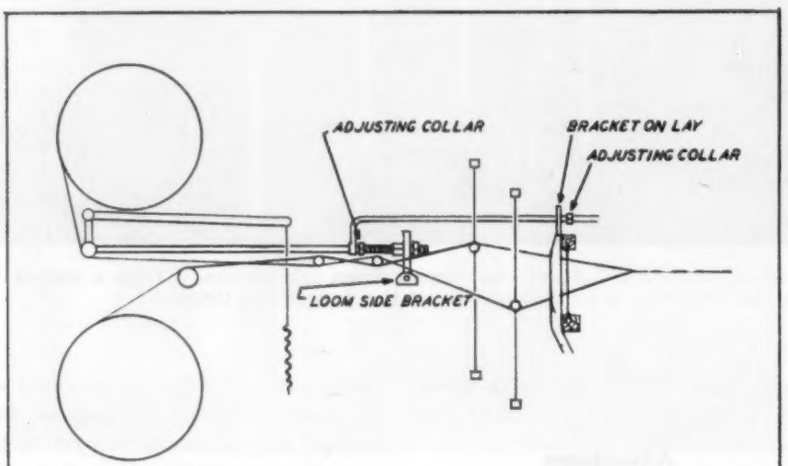
In the control of contraction in seersucker at the loom, a number of things should be taken into consideration: (1) The seersucker stripe contraction and the ground yarn contraction with relation to each other; (2) the manner in which it is run on the loom; (3) kind of yarns used in the fabric; (4) how the yarn was slashed, amount of size, width of stripe, pattern, etc.

Stripe and Ground Contraction

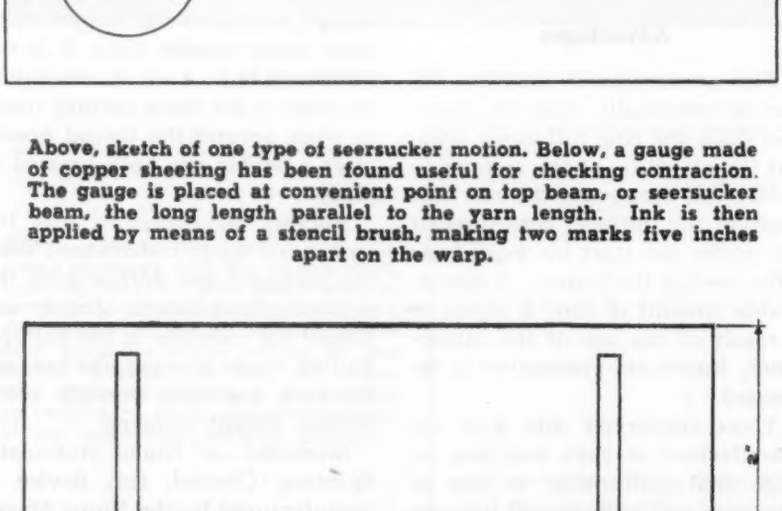
The contraction of the seersucker stripe may require 35% and the ground yarn 7%, the ratio being 35 to 7. To maintain contraction, most mills use a system of checking the contraction in the seersucker stripe alone. This method is fairly well accepted. But, what about the plain weave stripe? Doesn't the plain weave stripe also help to control the amount of contraction in the seersucker stripe?

To answer these questions, try tightening or loosening the tension on the plain stripe beam and then check the contraction of the seersucker. You will find that you will gain contraction in the seersucker stripe when the plain stripe beam is tightened and will have less contraction when it is loosened.

The difference in the contraction of the top and bottom beams must be kept in as near the same relation to each other as possible, because, when finishing the fabric, the seersucker stripe will be controlled by the amount of contraction in the plain stripe.



Above, sketch of one type of seersucker motion. Below, a gauge made of copper sheeting has been found useful for checking contraction. The gauge is placed at convenient point on top beam, or seersucker beam, the long length parallel to the yarn length. Ink is then applied by means of a stencil brush, making two marks five inches apart on the warp.



Method of Weaving

There are several methods used for making seersucker fabric on the loom, and most of these methods are not positive. There are a number of factors that come into the picture as we go along—the type of rigging used, the difference in the amount of yarn on each beam, type of tension let-off mechanism, etc.

The only way to keep the seersucker up to standard is to have a good system of checking and to be sure that the mechanism used will give the least trouble in making flat places in the seersucker stripe.

The kind of yarn used is important inasmuch as it goes a long

way in controlling seersuckers.

Single yarns in the seersucker stripe are easier to control than plied yarns, providing that they are not too heavily sized. Plied yarns only need a little size. If too much twist is in the yarn, kinking of the seersucker stripe is hard to control, particularly at 25% to 30% contraction.

When two or three ends are run as one in the seersucker stripe, care must be taken in drawing in the warp in its harness.

Each end to an eye is the best means of running this kind of seersucker for the yarn will lay more parallel, thus tying in better into the fabric.

Slashing of seersucker is important for unevenly sized yarn gives uneven contraction in weaving.

If the amount of size put into the seersucker stripe yarn is too heavy, it will give a kinky stripe; if it is too light, trouble will be experienced in weaving.

The ground yarn should be sized like any other plain weave warp so long as the amount of size is adequate.

The pattern of the seersucker stripe is a guiding factor in anticipating running conditions in the weaving. Wide seersucker striped patterns will give less trouble than narrow striped fabrics, and therefore, a more rigid checking system should be used in weaving.

To conclude this discussion, the writer has had wide experience in weaving, fixing, designing and testing seersuckers in all kinds of patterns of both fancy and plain weaves. New and old gadgets have been used, different types of equipment have been installed, and methods of checking with gauges have been used. However, due to the fact that the two beams of a seersucker run off at different rates of speed, thus changing the diameter of the beams, there has not been anything found up to now that will positively control seersucker other than a good checking system.

Process Water

AATCC studies processing water problems at roundtable meeting. Advantages cited for chlorination before filtration.

MEETING at the Atlanta Athletic Club in Atlanta, Ga., on June 7, members of the Southeastern Section of American Association of Textile Chemists and Colorists enjoyed a question and answer program on the subject of "Process Water." With the announcement of the meeting, members had been requested to submit questions on the subject, and 34 questions were received for discussion.

The group present at the speakers table to answer the questions included: Owen C. Abbott, The Bristol Co., Atlanta, Ga.; M. C. Welker, Ion Exchange Products Dept., American Cyanamid Co., New York, N. Y.; W. D. Smith, Calgon, Inc., Greenville, S. C.; J. S. Kneale, The Permutit Co., Chattanooga, Tenn.; Messrs. Weir, de Jarnette and Averette of the Department of Public Health, Atlanta, Ga.; Fred Melcher, The Coca Cola Co., Atlanta, Ga.; and H. H. Morrison, Liquid Conditioning Corp., Chattanooga, Tenn.

Questions were pulled at random by Leslie W. Bamberger of Lanette Bleachery & Dye Works, Lanett, Ala. Following are the questions discussed and a resume of the answers given.

Hardness of Water. What is the difference between the so-called "temporary" and permanent hardness of water?

Carbonates are referred to as temporary hardness which in general may be removed by boiling or by treatment with lime. Noncarbonates are known as permanent hardness and are difficult to remove.

Soft Water Regions. If you were going to locate a plant in a soft water region, where in Georgia and Alabama would you locate it?

No information was available on water in Alabama. A map of Georgia was exhibited which gave the specific hardness of both surface and ground water in all parts of the state.

In general, the state may be divided into three sections with respect to water hardness. A general tabulation folllows:

Section	Ground	Surface
Northwest-Mountain	Hard	Hard
Piedmont Plateau	Hard	Soft
Coastal Plain	Hard	Soft

For a particular area, the detailed map should be consulted since there are exceptions in all parts of the state.

pH of River Water. How closely can the pH of filtered river water be controlled without automatic equipment?

The pH can be controlled very closely (± 0.2 pH), provided adequate manpower is available for frequent checks. The nature of automatic controls for this purpose is to eliminate manpower diverted to such control work.

In general, small reservoirs will require more frequent checks to insure a constant pH. The utility

This resume of questions and answers was recorded at the meeting by R. E. Hudson and H. M. Waddle of the Research Division, West Point Mfg. Co., West Point, Ga., Ben Daniel of Lanett Bleachery & Dye Works, Lanett, Ala., M. H. Newton of Fairfax Mill Division, West Point Mfg. Co., and Miss Williams of the Research Division of Callaway Mills, LaGrange, Ga. Mr. Hudson compiled the report.

of "on the spot" control methods for prompt control of fluctuating conditions in the water as it is being treated, were preferred over depending on delayed results from a central control laboratory, it was pointed out.

Breakpoint Chlorination. Briefly discuss "breakpoint" chlorination. Compare chlorine consumption and benefit where applied to the raw water or to the filtered water. Point out the advantages of the use of ammonia in conjunction with chlorination.

Breakpoint chlorination refers to heavy chlorination in which sufficient chlorine is added to the water to initiate and complete oxidation of all easily oxidizable material present in the water. Ammonia compounds are said to be responsible for this "chlorine demand."

The chlorine demand of raw water is greater than that of filtered water.

Ammonia applied to water in conjunction with chlorine forms chloramine. The chloramine has the property of remaining in the water as such for much longer periods than chlorine. The chloramine is said to induce the breakpoint. The chloramine has a lower oxidation value than chlorine. Tastes are better controlled with chlorine.

Ammonia is usually applied at the rate of 1 part of ammonia to 3-6 parts chlorine. The usual concentration of ammonia (less than 0.5 p.p.m.) will not affect copper or brass pipe.

Tuberculation of Piping. Is it possible to have serious tuberculation of piping without large amounts of red water?

Yes, serious tuberculation is possible without red water. Where the pH is low, iron will be in the oxide form and appear as red water. Where the pH is high, iron will be in the hydroxide form and appear as tubercles.

It was reported that pipe lines had been seen that were practically closed due to tuberculation, yet no red water had been delivered through the pipe. A number of cases of serious tuberculation due to high pH in water for the carbonated drink industry, were reported to have been seen by one of the members.

Deionized Water. The "deionized" water using the resin exchange filters usually has a low pH of about 5.5. (a) Is this water suitable for drinking purposes? (b) If it is not, can it be made suitable for drinking purposes by aerating the deionized water?

Yes, the water is suitable for drinking purposes. The human body will adjust the pH to its own needs. The pH of "deionized" water will probably be 6.5-6.7, i.e., approaching neutrality. It was pointed out that deionizing systems do not remove bacteria.

Effect of pH on Textile Processes. Define pH and point out the probable effect of normal variations in the pH of process water on various textile processes such as: (a) Kier boiling. (b) Chlorine and peroxide bleaches. (c) Detergent scouring. (d) Various types of dyeing. (e) Enzyme desize. (f) Slasher size mixes. (g) Finish size mixes.

The effect of normal variations of pH of process water is negligible on (a), (b), (c). The effect on (d) is an open question but usually insignificant. The effect on (e) is variable but usually sensitive. Most size mixes, (f) and (g), are on the acid side, 6-6.8. High pH produces foaming due to fat saponification to soaps.

Red Water. Will Permutit unit, using Zeo-Carb, filter out any so-called red water from city mains?

Yes, but it removes same only by means of its filtering action. If the particles are fine enough, they will pass on through. In such cases a filter unit would usually be installed ahead of the Permutit unit.

Raising pH of Water. Discuss advantages of soda ash over lime for raising pH of filtered water.

Soda ash destroys the free CO_2 in water and does not raise the hardness. Twice as much soda ash as lime is required to perform the pH correction. Soda ash is 2-4 times as expensive as lime.

Cost of Deionized Water. Does completely deionized water (cation and anion removal) have any application in textile processing? How does its cost compare with cation removal methods?

Completely deionized water is used (a) in the drug room, (b) in lowering the viscosity of PVA, (c) correcting streaked dyeing (d) boiler feed water both for normal and high pressure boilers.

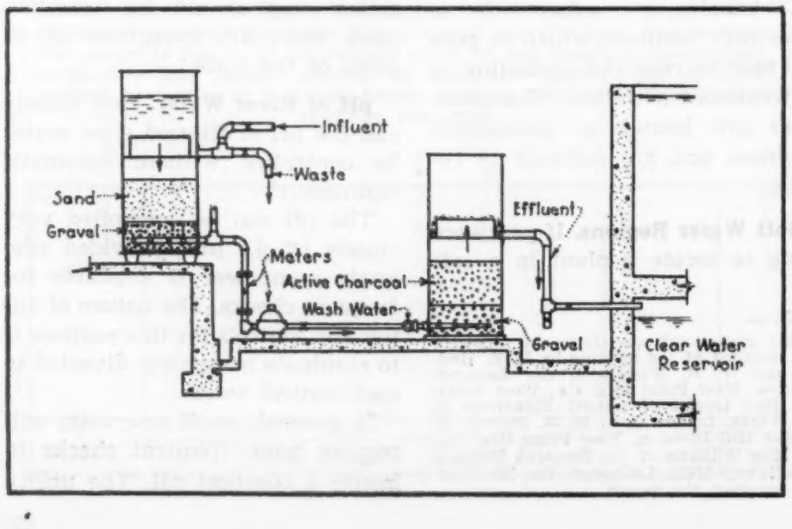
The cost of deionized water for boiler feed was given as six cents per 1000 gal. per 100 p.p.m. hardness to be removed.

Corrosion in Water Systems. Briefly point out the factors causing normal corrosion in water systems and causing "red water" conditions.

Improper conditions such as low pH and high CO_2 cause corrosion. "Red water" may occur at any pH up to approximately 7.6 and in some cases may be due to improper chlorination.

Effect of pH on Starch Mixes. Give an explanation of the increase

Typical activated charcoal filter.



of the pH of processed water on boiling and its effect on the viscosity of starch mixes and foaming in mill sizing operations.

At the boil, CO_2 may be expelled and the pH raised such that foaming may occur. Alkali in the water may act on fats and glycerides to form soaps and thus cause foaming. Gluten and albuminoids will cause foaming. The water for size operations should be neutral to acidic to control foaming. Salts such as calcium and zinc chloride may be used to hold down the pH. Alkali-modified starches may cause foaming.

pH in Bleaching. At what pH should your water be while bleaching with peroxide-chlorine?

The pH of the water is of no consequence on the pH of the peroxide and chlorine bleach baths. However, the pH of the water is important to this operation since iron pickup by the water in the lines is affected by the pH of the water.

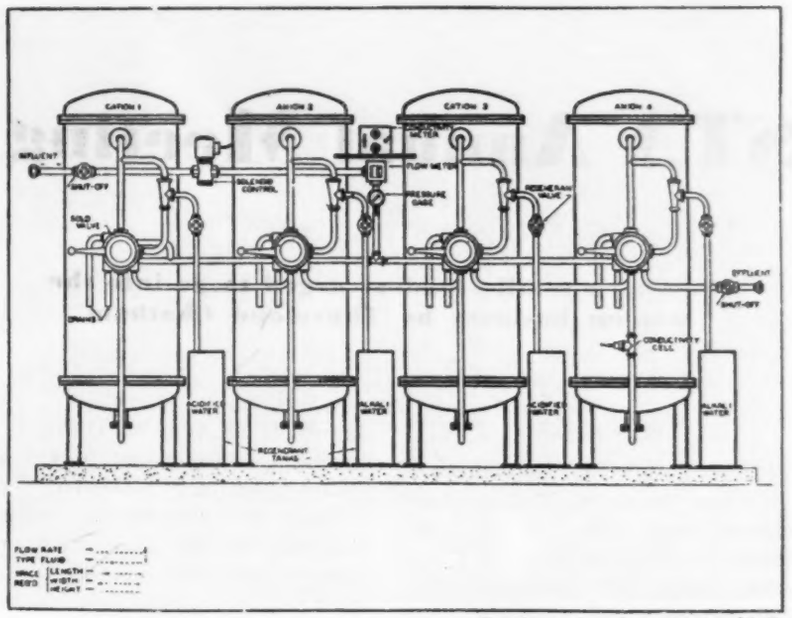
Chlorination Before Filtration. What are the advantages of chlorination of raw water before filtration?

The following advantages were listed:

(1) Bacterial load on the filters may be reduced.
(2) Odor and taste are reduced.
(3) Oxidation of organic matter.
(4) Algae and slime in the lines and filters may be controlled.
(5) Prevents decomposition of sludge in coagulation basis.
(6) Some oxidation of iron, etc., may occur.
(7) May aid flocculation but not extensively.
(8) Helps change colloidal form to improve coagulation.

Chemical Control of Hardness. Can the hardness in process water be completely controlled by chemical additives for various textile processes?

Yes, but for practical purposes, no. Sodium hexametaphosphate does the complete job but its use for such purposes is not practical. One and two-thirds ounces of sodium hexametaphosphate per grain per gallon hardness per 100 gallons of water was suggested as adequate for complete control of the hardness in process water.



Courtesy, American Cyanamid Co.

A demineralizing system consisting of four ion exchangers.

The use of a water softener followed by a suitable small amount of the metaphosphate was suggested as being the most practical approach to completely controlling water hardness.

Water for Vat Dyeing. What analysis would a good process water for vat dyeing of yarn on packages or beams show with the following in mind: calcium, magnesium, iron, copper, manganese, aluminum, other total water soluble dissolved inorganic salts, and dissolved organic matter? What of pH?

A good process water for vat dyeing should contain not over the following amounts:

Calcium	5 p.p.m.
Magnesium	—
Iron	0.1 p.p.m.
Copper	trace
Manganese	trace
Aluminum	0.05 p.p.m.

The other materials were not given.

The pH of a good process water for vat dyeing should be neutral to 7.6 if iron pickup from the piping could be avoided.

Boiler Feed Water. Briefly discuss boiler scale, corrosion, etc.

It is generally accepted that boiler scale can be maintained as soft scale through use of the orthophosphates. The cause of embrittlement has been assigned to the concentration of caustic on the boiler surface to cause intercrystalline attack. A new theory has to do with the attack by silica in the presence of caustic.

Carryover is caused by high concentration of solids in the water in the boiler, varying and sudden steam demand, and incorrect pH.

Corrosion in the boiler is promoted by CO_2, O_2, Cl_2, chlorides, and freedom of boiler surface from scale. By heating the boiler feed water above 212° F. (215-218° F.), all O_2 and CO_2 are removed. By adding a small amount of sodium sulfite, the residual trace of oxygen and chlorine may be removed.

Where carbonates are breaking down in the boiler, the feed water is generally treated with caustic soda. Where deionized water is used, silica remains in the water. This water should be treated with caustic soda in the ratio of $NaOH:SiO_2$: : 1 + 5 p.p.m. : 1. It is thought that nitrates are coming into use for embrittlement control.

Effect of Zeolite on pH. The zeolite process merely releases two sodium ions while collecting one calcium ion. The effect on the pH of the water is dictated by the difference in effect of the corresponding ions.

The synthetic resins in general raise the pH by 1.0 unit; 7.5 to 8.5.

STA Annual Meeting

Southern textile leaders urged to go into the woolen business by Thurmond Chatham.

Staff Report

THE 38th ANNUAL convention of the Southern Textile Association was held at Mayview Manor in Blowing Rock, N. C., on June 19-21, with approximately 300 members and associate members attending.

The convention opened on Thursday, June 19, with the traditional associate members banquet, with mill men and their wives as guests, and consisted of two business sessions, one each on Friday and Saturday mornings, and an STA banquet on Friday night. Floor shows were provided by the associate members division of the association following the banquets on Thursday and Friday evenings. Due to inclement weather, it was necessary to postpone the annual golf tournament; consequently, bridge, set-back and bingo served as pastimes for the group on Friday afternoon.

Speakers for the business sessions were John M. Caughman of Spartan Mills, Spartanburg, S. C., president of the association; Arthur C. Horrocks, Goodyear Tire & Rubber Co., Akron, Ohio; Hon. J. Strom Thurmond, Governor of South Carolina; and Thurmond Chatham, president of the board of directors of Chatham Mfg. Co. of Elkin, N. C.

McDowell Named President

Virgil McDowell of Rosemary Mfg. Co., Roanoke Rapids, N. C., was elevated from vice-president of the association to president, succeeding John Caughman. Other officers elected were Robert T. Stutts of Easley Cotton Mills, Liberty, S. C., vice-president; Smith Crow of Erlanger Cotton Mills, Lexington, N. C., chairman of the board of governors; and James T. McAden of Clark Publishing Co., Charlotte, N. C., secretary-treasurer, re-elected.

John M. Caughman, retiring president of the association, was named executive secretary, succeeding Marshall Dilling of Gastonia, N. C., who tendered his resignation during the annual association banquet on Friday evening. A resolution was adopted by the body commending Mr. Dilling for the many years of faithful and efficient service that he had rendered the association.

Virgil E. McDowell, newly elected president of the association.

Other members elected to the board of governors were S. M. Cauble of Acme Spinning Co., Belmont, N. C.; A. R. Marley, Erwin Cotton Mills, Durham, N. C.; Earl Crenshaw, Springs Cotton Mills, Lancaster, S. C.; R. E. Henderson, Dan River Mills, Inc., Danville, Va.; and F. E. Bozeman, Standard-Coosa Thatcher Co., Chattanooga, Tenn.

Dallas Neese, Odell Mill Supply Co., Greensboro, N. C., was elected chairman of the associate members division of the association. P. G. "Rip" Wear of Penick & Ford, Ltd., Inc., was named first vice-chairman; Byrd Miller, manufacturers' agent, second vice-chairman; and Junius Smith of Clark Publishing Co., Charlotte, N. C., secretary-treasurer.

New Processes Needed

In his annual report to the association, Mr. Caughman urged the development of new processes and equipment for the textile industry whereby the values per man hour worked will increase in the same ratio as the advance of the wage level.

Steps should be taken to better co-ordinate the various activities of the divisional groups, according to Mr. Caughman. This could be accomplished by having each divisional chairman render a report at the annual meeting.

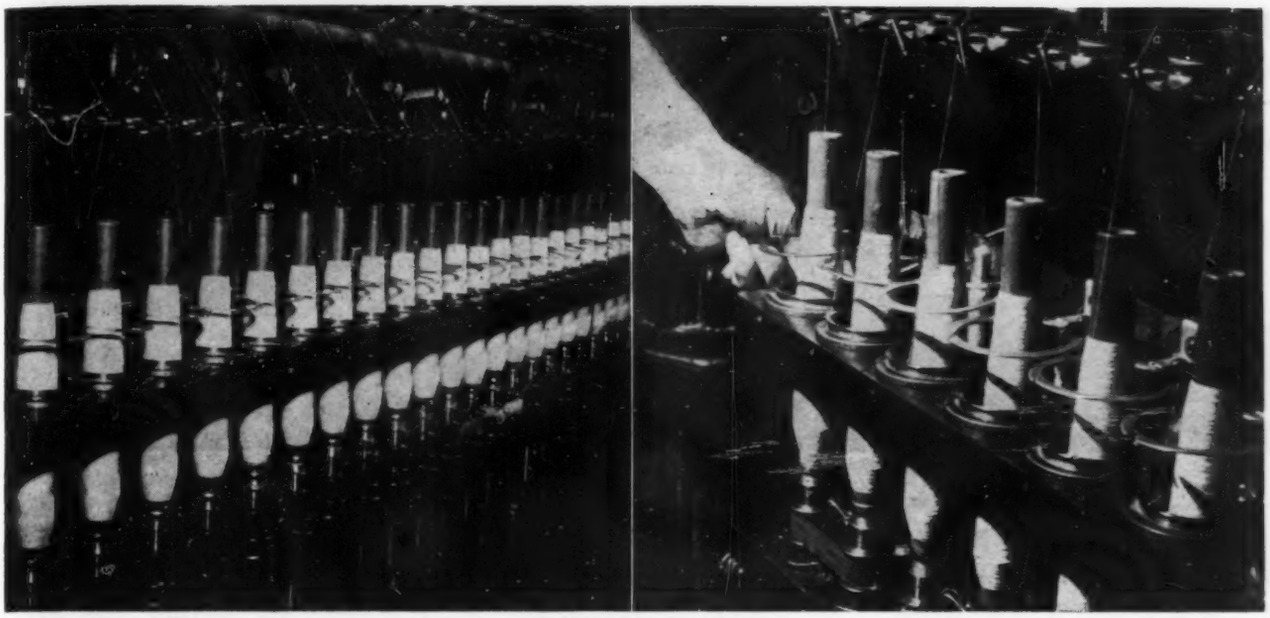
A committee to make surveys and compile data that would aid in establishing standard practices in the industry, was suggested. An example of this cited by Mr. Caughman was safety practice rules for the prevention of accidents.

Reiterating the recommendation of other past presidents—that a full-time director or secretary be appointed to co-ordinate and follow up on surveys and initiate research projects for the benefit of members, Mr. Caughman concluded his suggestions for the betterment or improvement of the association.

Arthur C. Horrocks of Goodyear Tire & Rubber Company, Akron, Ohio, presented an interesting general economic talk entitled "The Richest Man in Industry."

"We can have higher wages and salaries, we can earn greater dividends for the stockholders, and we can pay greater taxes, which are a necessity now and a challenge, if, and only if, we find ways and means to decrease the unit cost of manufactured products," said Mr. Horrocks.

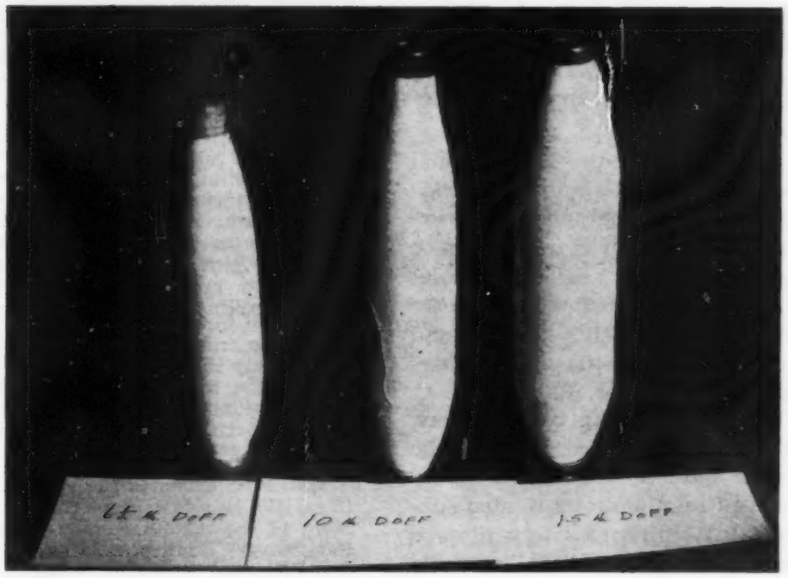
(Continued on page 120)



Left, spinning frame equipped with new type of separator designed to eliminate jerky motion of the traveler. Right, operative adjusts by means of a hand lever the rail on which separators are mounted. Below, three warp yarn packages are shown; note doffing interval indicated opposite each.

Balloon Control

Staff Interview



BALLOON CONTROL is a problem that is gradually being mastered at Joanna Cotton Mills Co., Goldville, S. C., through the efforts of Walter Regnery, assistant general manager, and Joe L. Delaney, general superintendent.

The primary object of the experiments being conducted is to eliminate that wear on rings which is due to a jerk on the traveler as the yarn moves out of contact with conventional separators on both back and front sides of the ring rail. There are four points on the ring where wear occurs due to this jerky motion. These are found where the yarn comes in contact with the front and back sides of each of the two separators.

New Separator Designed

A new type of separator has been invented (and patent applied for) that eliminates this jerky motion of the traveler. The yarn is constantly in contact with this separator.

Being circular in shape and having a diagonal slot cut in it to permit putting an end up, the separator is attached to a rail that may be lowered by a lever when doffing the frame.

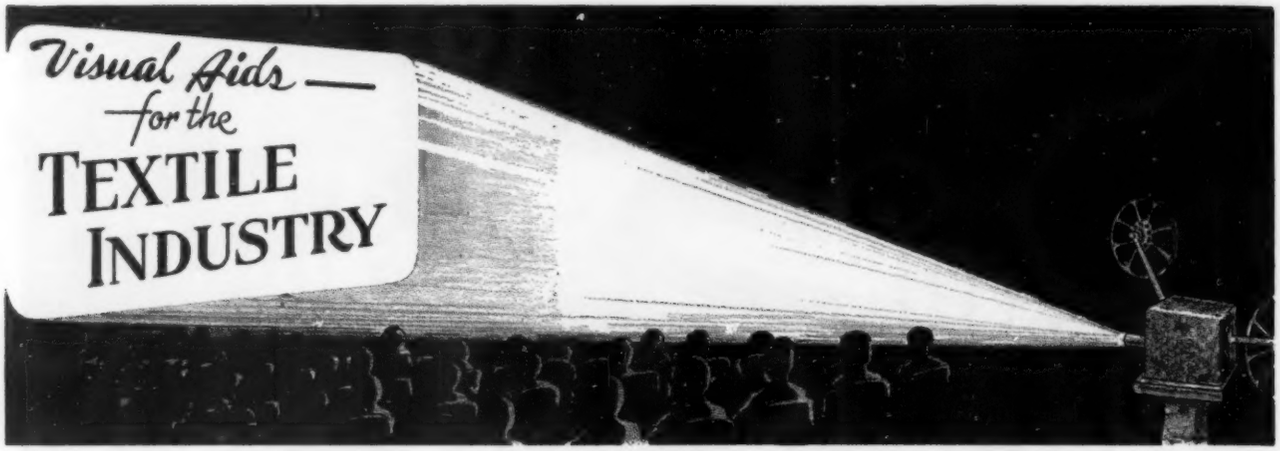
As the spindle and traveler revolve, there is a constant drag on the yarn instead of the usual jerky motion that occurs with conventional type separators.

With a combination of the new separator and the spindle adapter which was perfected at Joanna Cotton Mills Co. (page 104, Nov. 1946 issue TEXTILE INDUSTRIES, formerly "Cotton") the following frame set-up has resulted in a 15-hour interval between doffs. Spindle speed, 9,500 rpm, front roll speed, 130 rpm, twist multiple, 4.40, 2¼" ring, 3½" gauge, size of paper tube used is 9" long and ⅞" in diameter, producing six ounces of 30s yarn on a package 8¼" long and 2¼" in diameter.

When using 1⅞" rings, the same frame set-up will result in a doffing interval of ten hours.

By using the new separator and the spindle adaptor for each package, it is estimated that a saving of 100 per cent in doffing time will be effected.

Visual Aids — for the TEXTILE INDUSTRY



THE GREATLY increased production and use of visual materials during the war for both civil and military purposes has intensified interest in the potential use of visual aids as a significant tool of postwar training and production. The next decade may see the production of many films covering textile manufacturing in its many ramifications.

As a basis for the use of visual aids in the textile industry, it was felt that a bibliography of all existing materials was needed, to be supplemented as new aids are developed. This work was done by William A. Newell*, student, and the School of Textiles, North Carolina State College, Raleigh, N. C.

The bibliography covers fibers, manufacturing processes in the textile industry, management, industrial relations, and related subjects. A listing of safety films is not included as such a list would be as large again as the present work. The bibliography on safety aids may be obtained from the National Safety Council, 20 N. Wacker Drive, Chicago 20, Ill.

Listing of films on the economic aspects of business industry, and labor in general may be secured from the National Association of Manufacturers, 14 W. 49th St., New York 20, N. Y.

*To acknowledge here the assistance of the three hundred odd individuals, companies, organizations, and schools contacted in the course of this survey would involve a listing nearly as long as the final product. To all, let it be known that your aid and patience in answering letters, filling in forms, etc., are deeply appreciated.—W. A. N.

General Textile

MOTION PICTURES

Principles of Knitting
16 sd col 20 min CIF rental.
Illustrates principles of automatic machine knitting of hosiery using several well known machines as examples. Actual stitch formation is shown by animated diagrams. Narrative explains action of each part shown.

Looping of Hosiery
16 sd col 15 min CIF rental.
Aids in training of hosiery loopers; illustrates through slow motion the proper method. Made through the cooperation and supervision of the superintendent of looping operations at a large hosiery mill in North Carolina.

Modern Rug and Carpet Making
16 sd partly col 15 min FC.
Depicts the manufacture of Alexander Smith rugs and carpets in a large modern mill. Shows various kinds of weaves.

The Man Who Changed the World
16 sd BW 10 min U Ind rental.
Story of the achievement of James Hargreaves, English spinner, who invented the spinning jenny in 1767, thus laying the foundation for the machine age. The commentary describes this development in terms of its relationship to the conflict between man and machine labor.

Loom Weaving (Handicraft)
16 sd BW 9 min U Ind Rental plus T.
The intricate processes of the weaving loom are clearly shown by ingenious use of a transparent loom. First a school size four harness "jack", then a large balanced loom are shown. Selecting pattern, making warp chains on a frame, threads drawn through needles and beater, flat shuttle, weft beaten against fabric, tabby strip finish are all illustrated.

The Art of Spinning and Weaving
16 si BW 30 min U Kan rental plus T.
An authentic picturization of colonial background, and crafts of spinning and weaving flax and wool.

Men's Clothing Industry
16 si BW 30 min FC.
Training high school students in needle trades; work performed by various types of operators in the making of men's clothing in a factory; merchandising of clothing.

Facts About Fabrics
16 sd BW 26 min YMCA free, also AF and U Ind.
Describes yarns, construction, dyeing operations and finishing methods used in making textiles. Contains information on the care of fabrics.

What's In a Dress
16 one reel YMCA rental.
Old problems in the dress industry and new ways of solving them.

Threads of Fashion
16 sd BW Castle free.
The importance of a knowledge of sewing to conserve and save is the keynote of this motion picture which tells many things of interest to the young dressmaker as well as the older, more experienced seamstress. Many basic methods in the dressmaking craft are shown and described, helping the student seamstress to learn the right way and reminding more experienced people of things likely to be forgotten.

A Personal Investment
16 sd BW 40 min HSM
Transportation only.
Describes manufacture of men's suits from laboratory testing of fiber and fabrics, through designing and styling processes, pattern-making, inspection of cloth, cutting, and assembly operations.

What Shall I Wear?
16 sd BW 18 min HFC T only.
Not distributed in South.
How to build a satisfactory wardrobe for the entire family. Dramatic presentation of ideas on planning ahead, shopping with skill, and keeping clothes wearable. Not a fashion picture or story.

Clothing
16 sd BW 1 reel AmMusNatHis rental.
Typical ways in which backward people use the materials in their immediate environment for clothing. Traces the development of textile arts through hand processes of various nationalities to the mass production of the modern machine age. Illustrates effect of climate and environment on materials and modes of dress. The effect of mass types of production coupled with transportation and communication facilities is shown as tending to spread the clothing of the machine countries throughout the world.

Harnessing the Rainbow
16 sd col 29 min Dupont T only.
How colors are applied to fabrics and highlights such qualities as wash fastness, light fastness, and perspiration fastness. While nontechnical in character, describes briefly dye manufacturing and application processes. Laboratory tests are shown, and informative labeling as a guide to buying merchandise with satisfactory color fastness is stressed.

The CRA Electromatic Cloth Spreader
16 si BW 10 min CRA loan.
Interesting to production men, engineers and others in cutting-up industries. Shows latest developments in cloth-laying equipment. Gives cutter's-eye view of electromatic cloth spreader in action, laying out materials on long and short cutting tables quickly and accurately with minimum effort on part of the operator.

FILM STRIPS

The Marketing of Men's Shirts
35 si BW 53 frames with manual, SVE sale $3.50.
Includes historical collars, the development of the Arrow collar market, magazine advertisements of Arrow collars, changes in advertising accompanying the change to shirts with collars attached, magazine advertisements of Arrow shirts, illustrations of the important steps in the production of Arrow shirts. Eleven page manual by Professor Dale Houghton.

Guide to Fabric Selection
BW 47 slides U Ind rental plus T.
Produced by U. S. Bureau of Home Economics. Illustrates the points which should be considered when selecting fabrics.

LIST OF ABBREVIATIONS

16	16 millimeter film
35	35 millimeter film
Si	Silent film
Sd	Sound film
Min	Minutes of running time
BW	Black and white film
Col	Colored film
Sl	Slides
Rental	For rent by supplier
Sale	For sale by supplier
Pic	Pictures in a slide film
T	Shipping cost both ways
NDC	Nearest distributing center

Cotton

MOTION PICTURES

Cotton
16 sd BW 11 min U Ia Rental $1.00 plus T.
The story of the manufacture of cotton cloth, from picking of the boll to the mill to the consumer. All processes are shown.

King Cotton
16 sd BW 19 min JH.
Improvements in growing and ginning of cottons, how the finished product is used, including the manufacture of upholstery, tire fabric, plastics, and other textiles.

Cotton—From Seed to Cloth
16 si BW 22 min U Tex Rental $1.50 plus T.
Cotton growing regions of the world, and fiber picking, ginning, marketing, and manufacture into cloth.

From Cotton to Cutter
16 sd Col 22 min Reeves free.
Complete story of manufacture and use of cotton fabrics in war and peace. Shows bale sampling, and follows processes from carding through weaving and finishing. All processes shown in detail.

Cotton Goods
16 si BW EB.
Covers the picking, ginning, baling and sale of cotton, the carding, drawing and twisting of yarn, production of thread, weaving of cotton fabrics, and some of the multiple uses of cotton in everyday life.

ABBREVIATIONS AND ADDRESSES OF SUPPLIERS

A&B	Akin & Bagshaw, 2023 East Colfax, Denver, Col.
AmMusNatHis	American Museum of Natural History, Central Park West at 79 Street, New York, N. Y.
AmVis	American Viscose Corp., 350 Fifth Ave., New York, N. Y.
Assoc	Associated Films, 347 Madison Ave., New York 17, N. Y.
BIS	British Information Services, 30 Rockefeller Plaza, New York 20, N. Y.
BH	Bell & Howell Filmosound Library, 1801 Larchmont Avenue, Chicago 13, Ill.
Bruck	Bruck Silk Mills, Ltd., Box 6085, Montreal, Canada.
Cannon	Cannon Mills, Kannapolis, N. C.
Castle	Castle Films, 30 Rockefeller Plaza, New York 20, N. Y.
Comm	Commercial Films, 1800 East 30 Street, Cleveland, O.
CRA	Cutting Room Appliances Corporation, 45 West 25 Street, New York 10, N. Y.
CIF	Carolina Industrial Films, Charlotte, N. C.
Dartnell	Dartnell Corp., 4660 Ravenswood Avenue, Chicago, Ill.
DuPont	E. I. DuPont de Nemours & Co., Inc., Wilmington, Del.
EB	Encyclopedia Brittanica Films, Inc., 20 North Wacker Drive, Chicago 6, Ill.
FC	Films of Commerce, 21 West 46 Street, New York, N. Y.
FL	Fruit of the Loom, Inc., 15 Westminster Street, Providence 3, R. I.
Ganz	W. J. Ganz, 19 East 47 Street, New York, N. Y.
GE	General Electric Co., Publicity Department, Schenectady 5, New York
GM	General Motors Corp., Public Relations Dept., 1775 Broadway, New York, N. Y.
Goodyear	Motion Picture Dept., Goodyear Tire & Rubber Co., Akron, Ohio
HFC	Household Finance Corp., 919 No. Michigan Ave., Chicago, Illinois
HSM	Hart, Schaffner & Marx, 36 S. Franklin St., Chicago, Ill.
JH	Jam Handy Corp., 2821 East Grand Blvd., Detroit 11, Michigan
MacVeagh	Modern Talking Picture Service, 9 Rockefeller Plaza, New York, N. Y.
Reeves	Reeves Brothers, Inc., 54 Worth Street, New York, N. Y.
SocVac	Socony Vacuum Oil Co., 1602 Baltimore Trust Bldg., Baltimore, Md.
SVE	Society for Visual Education, 100 East Ohio St., Chicago, Ill.
TFC	Teaching Film Custodians, Inc., 25 West 43 Street, New York 18, N. Y.
U Ia	State University of Iowa, Iowa City, Iowa
U Ind	University of Indiana, Bureau of Audio-Visual Aids, Extension Division, Bloomington, Indiana
U Kan	University of Kansas, Lawrence, Kansas
U.S.B.M.	U. S. Bureau of Mines, Experiment Station, 4800 Forbes St., Pittsburgh 13, Pa. or NDC
U.S.D.A.	U. S. Department of Agriculture, Motion Picture Service, Office of Information, Washington 25, D. C.
U Tex	University of Texas, Visual Instruction Bureau, Austin, Texas
VIT	Visual Industrial Training, 60 East 42 Street, New York 17, New York
Vocafilm	Vocafilm Corp., 424 Madison Avenue, New York, N. Y.
WD	Motion Picture Branch, War Department Bureau of Public Relations, Washington 25, D. C.
YMCA	Motion Picture Bureau, Y.M.C.A., 347 Madison Ave., New York 17, N. Y.

Cotton at War
16 sd BW 16 min WD.
Especially made for the cotton manufacturing section of the country. Combat and training scenes vividly show that cotton is an integral part of virtually all types of military equipment.

Conquering the Desert
16 and 35 si 30 min Goodyear free.
The story of the transformation of a desert wasteland in Arizona into an expansive cotton plantation. Shows the development of the plantation and villages, planting of seeds, gathering of crop, movement to gins, then to mills and manufacture into cloth.

Cotton Growing
16 si BW EB.
Shows the cotton belt of the U. S., various steps in preparing the ground, stages in the growth of cotton plants, methods of fighting the boll weevil, harvesting, ginning, bagging, sampling, selling and transporting cotton.

Sam Farmer's Cotton
16 & 35 sd 31 min USDA.
Improvement in cotton crops and finances through seed selection and treatment, proper planting and cultivation, fertilization, picking, terracing, crop rotation, and other scientific agricultural practices.

Threads of a Nation
16 BW sd 10 min TFC T only,
also U Ind rental plus T.
The cotton industry from the planting of the seed to the finished product. Historical sequences show the use of cotton from ancient times to the present. Modern methods of laboratory testing, dyeing, drying, and designing are presented.

Land of Cotton
16 si 1 reel BW AmMusNatHis
rental plus T.
The cotton industry from the planting of the seed to the finished fabric.

Civilization's Fabric
16 si BW 20 min FL T only.
Machinery, guided by human skill, transforming the cotton fibers into wear resisting fabrics of highest quality. Starting on the cotton plantation, one is conducted step by step through the mill processes and early stages of finishing. Produced for educational purposes, entirely non technical. Majority of shots taken at point of operation.

The King's Other Life
16 sd Col 20 min Bemis Bag Company, 408 Pine St., St. Louis, Mo. Loan.
Shows cotton moving progressively from fields, through mills for processing into yarn, then woven into cotton cloth, and finally fashioned into bags for use by industry. Show laboratory control, dress designing and garment manufacture, and subsequent use of bags in home.

FILM STRIPS

Cotton Industry
35 si BW 2 ft Rental 10c
U Tex plus T.
Shows the uses of cotton, the cotton belt section of the U. S., different stages in the cotton crop from the time the ground is plowed until the cotton is picked. Contrasts horse and machine methods of plowing and harrowing. Shows conversion of cotton fiber into fabrics.

Gins and Ginning
USDA.

Conditioning and Cleaning Seed Cotton
USDA.

Waste Ain't Waste
35 sd 82 frames 14 min VIT rental.
Animated. For training card room operators in how to prevent unnecessary waste in the carding process.

Cotton, the Household Fabric
35 si Cannon loan.
Shows manufacture of cotton fabrics from field to finished cloth, and applications in household of cotton products.

SLIDES

The Manufacture of Cotton Cloth
20 sl si BW U Kan sale 25c.

The Story of Cotton
32 sl si BW U Kan sale 25c.

Cotton Industry in the U. S.
25 sl si BW U Ind
rental 75c plus T.
How cotton is raised and marketed; how the cotton textile industry has developed, and what serious problems face the cotton-belt farmer.

Cotton
59 sl si BW U Ind
rental 75c plus T.
Growing, harvesting, marketing, and spinning cotton. Life of cotton pickers; preparation of cotton by-products.

Wool

MOTION PICTURES

Wool Marketing and Manufacturing
16 and 35 si BW 45 min USDA free.
Shows sheep shearing, fleece tying, packing, and grading. Mill operations show sorting, and all processes of making both woolen and worsted yarns, weaving of fabrics, and finishing. Closes with sequence of uses of woolen fabrics.

Golden Fleece
16 sd BW 11 min U Tex
rental plus T.
The wool industry of Australia. Illustrates flocks of sheep, washing of wool while still on animals, shearing sheds, branding of sheep after shearing, fleece grading, and packing.

Cooperative Wool From Fleece to Fabric
16 sd BW 30 min U Kan
rental, Castle sale.
The story of wool, beginning on western ranges where droves of sheep are tended by herders and dogs. Illustrates shearing, progress of wool to market and finally to consumer, through markets and factories. Emphasis on cooperative methods of marketing.

Woolen Goods
16 si BW 1 reel EB rental or sale, also U Ind rental plus T.
Traces the sources of wool, contrasts methods of shearing, carding, spinning and weaving homespun and factory-made woolens. Operations involved in making an overcoat from the preliminary testing of fabrics to sale of coat.

Botany Clothes the Nation
16 sd col 15 min YMCA
and Spot, T only.
Manufacture of worsted cloth at Botany Mills. A Kodacolor film showing raw wool and manufacture into clothing. Special attention given to tests in the chemical and textile laboratory to insure quality.

A Woolen Yarn
16 and 35 si BW 15 min GE loan or sale.
The history of the woolen industry, contrasting the crude methods of early times with electrically operated mills. The process is portrayed from the clipping of sheep through carding and washing wool to combing and drawing. This film may be classified as Americana, giving an idea of spinning in early American homes.

Wool
16 sd col 40 min Deering-Milliken Company, New York, N. Y., loan.
Outlines process of manufacturing woolen fabrics from fleece to finished cloth. Shows many manufacturing and quality control methods of Deering-Milliken mills.

SLIDES

Woolen Industry
36 slides BW U Ind rental plus T.
Traces the woolen industry from sheep shearing and packing of raw wool in Australia through the various processes of manufacture in American woolen mills. Includes views of tapestry weaving.

Rayon

MOTION PICTURES

Rayon, a New Frontier of Progress
16 sd BW 2 reels AmMusNatHis
rental plus T.
Raw materials and steps involved in manufacture of spun rayon yarn, acetate yarn, and mignon yarn. Uses of different kinds of rayon yarns.

Fashion's Favorite
16 sd BW 35 min YMCA rental plus T, also U Ind rental plus T.
Rayon manufacturing from raw materials through spinning, also fabric manufacture. Illustrates differences in viscose and acetate yarns, points out principal characteristics and uses of rayon in textiles.

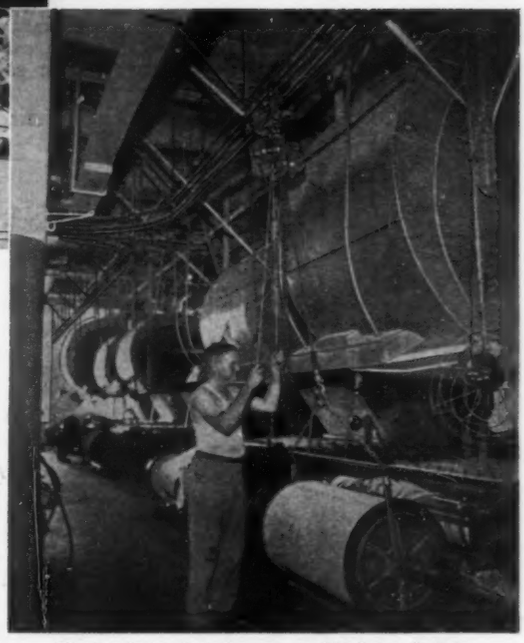
Rayon
16 sd BW 35 min Am Vis loan.
Processes in the manufacture of viscose rayon.

How Rayon is Made
16 sd 35 min BW Assoc free loan.
Gives in semi-technical detail the key steps in manufacture of rayon from raw materials to finished

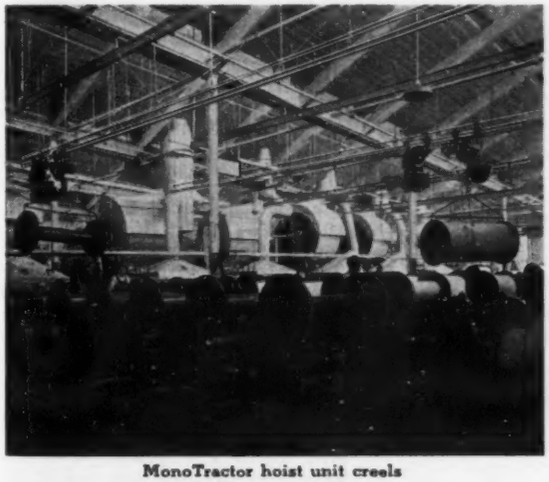
HANDLING BEAMS

The Easy Way!

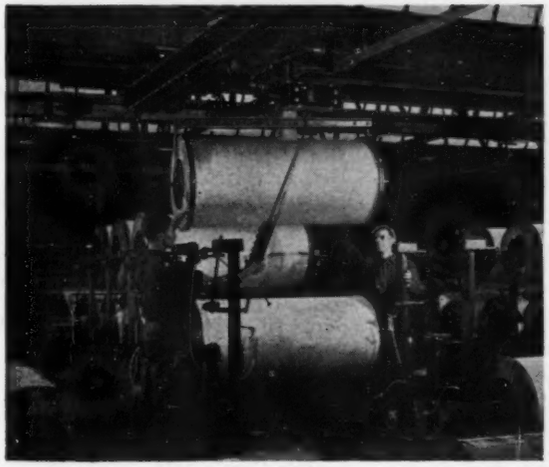
Free moving crane serves long weave room bays.



Electric hoist doffs beams quickly from slashers.



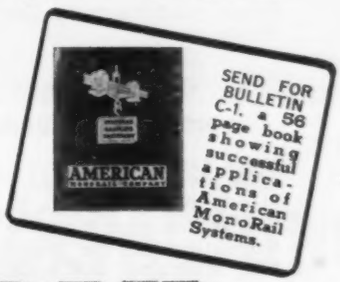
MonoTractor hoist unit creels slasher by fingertip control.



Power operated crane and carrier assures accurate spotting.

Beams and rolls move fast and safely when American MonoRail Overhead Systems serve your warpers, slashers and looms. These systems not only save time and money, they reduce fatigue and accidents, eliminate congestion and spoilage, and keep production on schedule without delay.

With thousands of installations to draw from, American MonoRail Engineers are well qualified to offer solutions involving overhead handling equipment. This service is offered without obligation.



THE AMERICAN MONORAIL COMPANY

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products. Of particular interest to textile students.

FILM STRIPS

The Story of Rayon
35 si BW 28 frames SVE
sale $2.00, with manual.
Deals only with the viscose and acetate methods of making rayon. The various steps in the process, treating, ageing, filtering, spinning (and the applicable steps in the acetate method) are illustrated by pictures from a rayon plant. Each picture is accompanied by explanatory text in the six page manual.

Silk

MOTION PICTURES

The Fabric of Our Story
16 sd col 20 min Bruck loan. (Not yet available for distribution in the United States).
A tour of the Bruck Silk Mills, Ltd., plant at Cowansville, Quebec, showing all various steps entailed in manufacture of fine fabrics from yarn to finished product. Includes a display of fabrics and fashions, interwoven with a trip down St. Lawrence river.

The Silk Industry
16 si BW 10 min U Tex
rental plus T.
Illustrates manufacture of silk from cocoon to the finished fabrics.

The Romance of Silk
16 si 1 reel AmMusNatHis
rental plus T.
Life history of the silk worm from selection of cocoons for breeding to obtaining raw silk. Shipping of the silk to the United States. The entire manufacturing process is shown in detail to the finished bolt of silk.

Silk, from Cocoon to Spool
16 si BW 1 reel AmMusNatHis
rental plus T.
The life of the silkworm, obtaining raw silk from the cocoon, winding in skeins, and the manufacturing process through the dyeing and winding on spools for shipment.

Silk
16 si BW 14 min U Ia rental plus T, also U Ind rental plus T.
Contains views of raw silk culture in Japan, animations and scenes showing time required and country traversed to reach industrial centers of the U. S. Latest methods of fabric production in the mill are shown.

Other Fibers

MOTION PICTURES

From Flax to Linen
16 si BW 1 reel EB rental or sale, also U Tex rental plus T.
Traces flax from the plant and seed stage through the threshing, retting, scutching, and hackling processes to line flax, the spinning of line flax, weaving, bleaching of fine linen cloth. The finished linen articles are then viewed in the light of a long process of manufacturing.

In Batik Land
16 si BW 15 min A&B rental.
The making of batik cloth, one of the interesting of the many industries of this strange land.

The Story of Asbestos
16 and 35 si 30 min USBM loan.
Shows sources of asbestos, blasting operations, cobbing longest fibers, crushing and vacuum separation. Illustrates making of textiles, carding, rolling into roving, spinning into yarn, and weaving into cloth. Depicts uses of asbestos in manufacture of fireproof fabrics, rope, packings, etc.

SLIDES

Flax and Linen
24 slides, BW, U Ind rental plus T.
Retting, carding and spinning flax, drawing, roving and weaving thread, preparation of linen cloth for sale.

Management and Personnel Relations

MOTION PICTURES

(Employment and Induction)

I Want a Job
16 sd BW 22 min BH rental.
Millions of young people, now seeking their first jobs, could benefit by this interestingly dramatized lesson on self-appraisal in terms of local job opportunities, and of how personnel managers size up applicants.

Courtesy Comes to Town
16 sd BW 19 min BH rental.
Practical values of courtesy brought out by interesting story. Many examples of discourtesy of present and past generation brought to light, sometimes amusingly.

Use of Pups and Puzzles
16 sd 1 reel BW 11 min U Ia
rental plus T.
A study in individual differences and techniques to be followed in fitting applicants to the positions of their greatest usefulness. By way of illustration, a psychiatrist observes animal's reactions to certain stimuli in order to judge better what to expect from humans under given conditions. Comparisons are made of three young men's reactions to the same kinds of tests.

Placing the Right Man on the Job
16 sd 1 reel BW 13 min U Ia
rental, also B&H rental.
Several workers who are misfits on the jobs they are doing are reassigned to different jobs resulting in happier workers and increased production. The necessity of taking into account individual differences is clearly indicated.

(Employee Induction and Selection)

Introducing the New Worker to His Job
16 sd BW 16 min U Ia and BH, rental; or Castle sale.
A new worker is being started on his job. First, the induction is done very poorly. This becomes apparent as the new worker shows considerable dissatisfaction with his treatment. The same job is done over again, but this time it is done as it should be. The difference between the first and second ways of inducting the worker is obvious.

First Impressions
16 sd BW 21 min BH rental.
Primary steps in giving new employees a good first impression of the job they are expected to do.

A New Supervisor Takes a Look at His Job
16 sd BW 13 min U Ia and BH rental; Castle sale.
A young workman has just been made a line supervisor. In an interview with the superintendent, he is shown that in his new job he must learn to get results by working with people instead of machines. The importance of the human element is brought out.

(Personnel and Production Management)

The Boss Didn't Say Good Morning
16 sd BW 11 min U Ia and TFC, rental.
A story of the psychological effect a boss' failure to say good morning has on his employees.

Maintaining Good Working Conditions
16 sd BW 9 min U Ia and BH, rental; Castle sale.
Several cases where improvement in working conditions resulted in increased production and better satisfied workers are enacted. The importance of the part played by supervisors in maintaining good working conditions is emphasized.

Working with Other Supervisors
16 sd BW 8 min U Ia and BH, rental; Castle sale.
Several supervisors discuss Larry, one of their colleagues, who has been unable to work harmoniously with them. The question is raised and discussed of what can be done about Larry.

The Supervisor as a Leader
Part I: 16 sd BW 14 min U Ia and BH, rental; Castle sale.
Several workmen are asked what they consider to be the qualifications of a good supervisor. To them, the four most important are: Always keep promises; never take credit for someone else's work; don't pass the buck; and don't play favorites.

Part II: 16 sd BW 13 min U Ia and BH, rental; Castle sale.
Four supervisors discuss the qualities of leadership. Dramatized incidents make clear what they mean. One man lets his job go to his head, another goes to pieces and cannot control himself, etc. In other incidents it is pointed out that the good supervisor is not afraid to praise his men for work well done and that he is loyal to them.

Supervising Workers on the Job
16 sd BW 10 min U Ia and BH, rental; Castle sale.
Various kinds of poor supervision practices are shown, among them nagging, snooping, etc. By dramatized incidents, the poor results of

Most of the advances in ball bearing design for textile machinery of the last ten years were born at New Departure. Would you like to know more about them? - - - -

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NEW DEPARTURE

BALL BEARINGS

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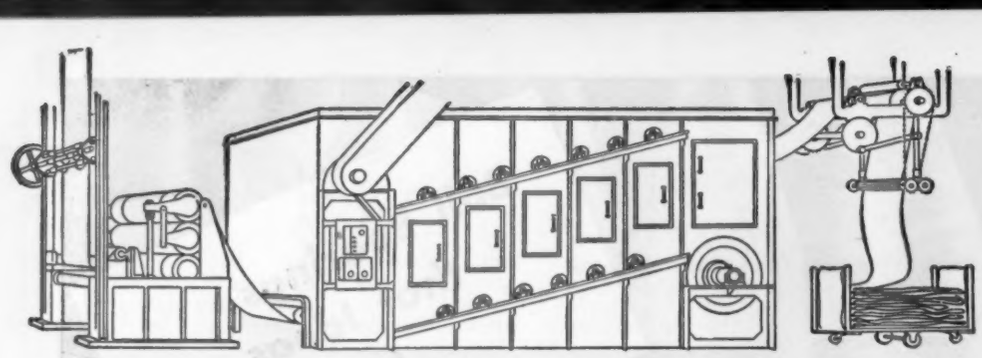
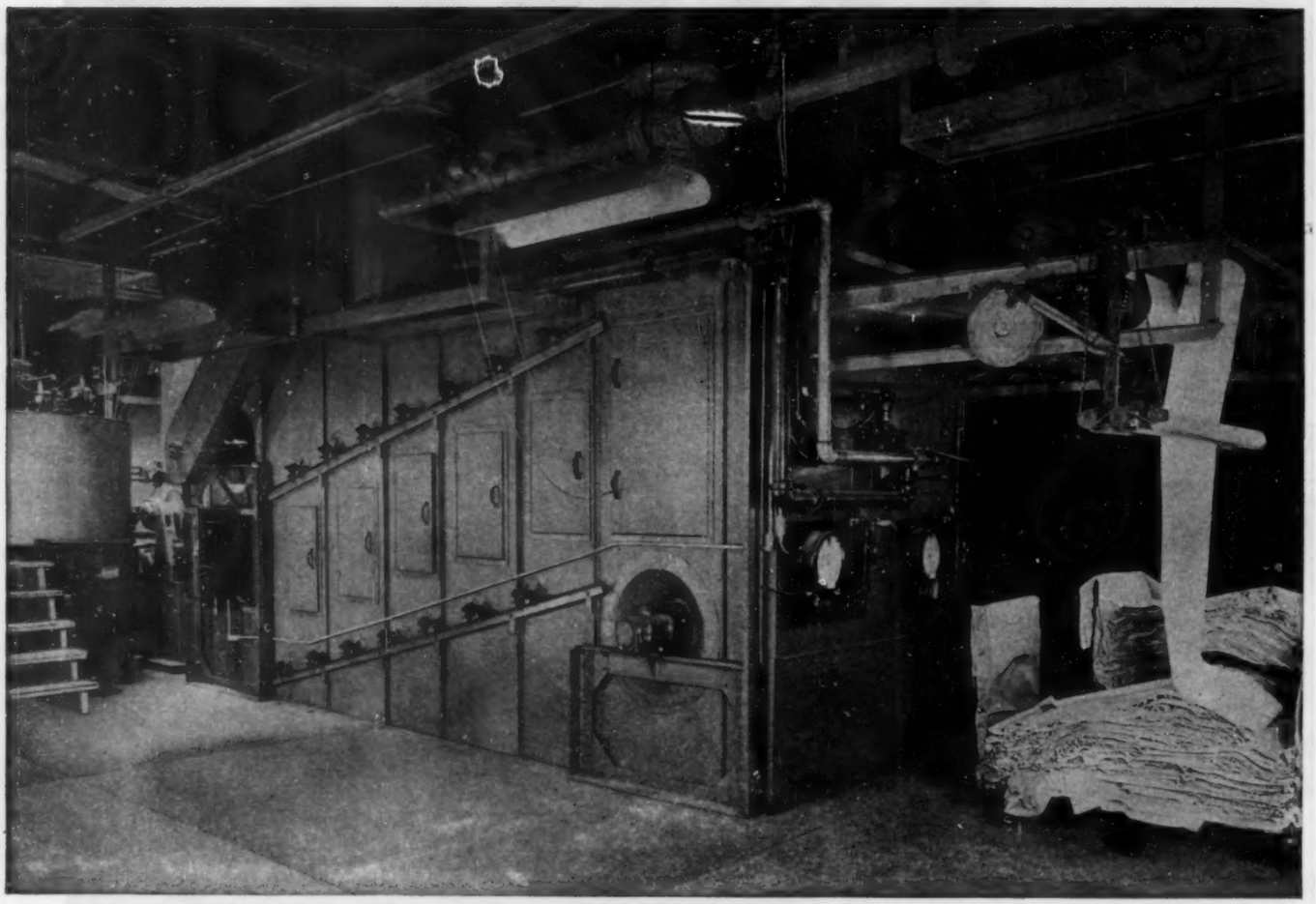
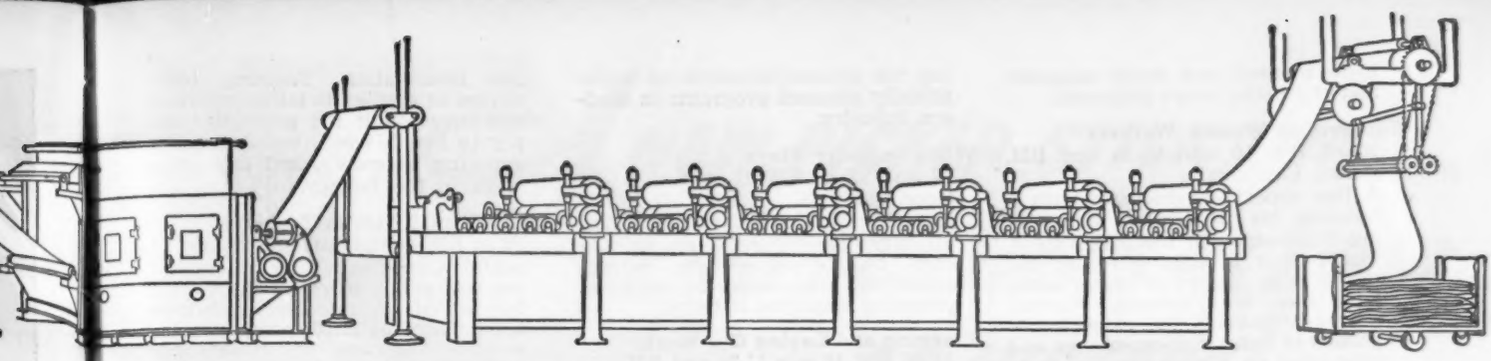
NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONN. • Branches in DETROIT • CHICAGO • WASHINGTON, D. C.



In the first section of the Butterworth Vat Dyeing Range, goods enter a 3-roll padder in which the color is applied in pigment form, followed by drying on a special type air-dryer and folding onto a hand truck.



Delivery end of Butterworth 2-roll pad and impinge dryer in Vat Dyeing Range. Accurate control of the air velocity and temperature in the impinge dryer eliminates any possibility of migration. Goods are dried to within 15-20% of the moisture content.



In the second section of the Butterworth Vat Dyeing Range, goods are impregnated with chemicals on a 3-roll padder and then enter a steamer. (Note choice of cloth entrance—at top for straight steam process or at bottom through a liquid seal for steam and liquid booster processes.) After steaming, goods pass through a water seal and squeeze rolls, and are washed in a 6-box washer, followed by folding onto hand truck.

FINER, FASTER COLORS AT LOWER COST TO YOU

A full range of vat colors, from pastel to very deep shades, can be applied continuously on the Butterworth Vat Dyeing Range. Improved appearance, greater color yield, fastness to crocking, washing and bleaching, as well as fastness to light are imparted to a wide variety of fabrics in either long or short yardages.

There are substantial savings, up to 25% in the cost of color application. Exhaustion problems are overcome. Seconds due to shade variations and specking are eliminated. Close shade control is obtained even in short runs. Liquid boosters can be added to meet specific mill conditions.

The Butterworth Continuous Vat Dyeing Range is designed to allow easy access for threading. Tensions are adjustable for various fabrics. Non-oxidizing metal is used exclusively in the construction.

The Butterworth Continuous Vat Dyeing Range operates at speeds up to 120 yards per minute for increased production. The controlled action of liberated "live" steam permits these speeds without effecting the chemical stability of the leuco.

Investigate the Butterworth Continuous Vat Dyeing Range. Write or call for detailed information.

Butterworth

H. W. BUTTERWORTH & SONS COMPANY, Philadelphia 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N.C. W. J. Westaway Co., Hamilton, Ont. - ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pflieger & Co. - BOLIVIA: Schneiter & Cia., Ltda., La Paz BRAZIL: Cia. Industria e Commercio, Glossop, Sao Paulo e Rio de Janeiro - CHILE: Schneiter & Cia., Ltda., Santiago. COLOMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrull, Havana - ECUADOR: Richard O. Custer, S. A. Quito - FRANCE: Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: I. Sloboczky, Mexico, D. F. - MIDDLE EAST: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson, Goteborg - URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.

these methods are made apparent and the better ways indicated.

Supervising Women Workers
16 sd BW 10 min U Ia and BH, rental; Castle sale.
A line supervisor discusses with a foreman, his problems of supervising the women in his department. The fact is brought out that the same rules apply in supervising both men and women. Women, however, haven't the same background of industrial experience and very often have more home responsibilities than men. These facts must be taken into account by the supervisor.

Discipline: Giving Orders
16 sd BW 15 min U Ia and BH, rental; Castle sale.
Stresses the importance of disciplining a person properly and giving orders clearly. Shows the results obtained in an office where emphasis is placed on gaining the worker's confidence, and not making threats and instilling fear into employees.

Discipline: Reprimanding
16 sd BW 16 min U Ia and BH, rental; Castle sale.
Shows several examples of proper and improper reprimanding of employees by supervisors and how the efficiency and production of an office can be increased and decreased depending on how the situation is handled.

Maintaining Worker's Interest
16 sd BW 13 min U Ia and BH, rental; Castle sale.
Various workers are shown doing poor work because their jobs hold no interest for them. The point is made that the supervisor should be alert to detect and remedy these situations whenever possible.

Suggestion Box
16 sd BW 8 min U Ind rental plus T.
Presents several examples of how worker's suggestions in war plants resulted in improved methods of manufacture. Shows such workable suggestions as ideas for sorting metal tubing, reclaiming valuable lubricating oil, and using a mold in mounting lenses.

Minutes are Pennies
16 sd BW 21 min BH rental.
The right and wrong ways of meeting responsibilities of routine business jobs, promptly and cooperatively, are shown in this interesting story of the handling of a rush order. A parallel is drawn with the split-second coordination and teamwork of a football team.

Partners in Production
16 sd BW 28 min BIS loan.
(Made in England) With an incident in a north country coal mine as its kernel, the film outlines the story of the joint-action committees in Britain. There are certain differences between the functions of these committees and American labor-management committees.

Manpower, Music and Morale
16 sd BW 15 min Ganz loan.
The use of music in industry stressing the accomplishments of scientifically planned programs in modern industry.

When Industry Plays
16 and 35 sd BW 12 min Goodyear free.
Shows annual employee picnic and all activities involved, games, parade, beauty contest, etc. Helpful ideas to any large organization planning employee outings.

Planning and Laying Out Work
16 sd BW 10 min U Ia and BH, rental; Castle sale.
Dramatized incidents point up the importance of careful planning before starting a job. The serious results of poor planning or no planning at all are demonstrated.

Maintaining Quality Standards
16 sd BW 10 min U Ia and BH, rental, Castle sale.
Various scenes emphasize the nature of quality standards. The role of the supervisors in maintaining quality as well as quantity is made clear by incidents involving poor instruction, carelessness, and lack of pride in good workmanship.

Every Minute Counts
16 sd BW 10 min BH, rental; Castle sale.
A supervisor becomes worried because of absenteeism and tardiness in his department. His superintendent points out many causes and supervisor takes steps to remedy them.

Improving the Job
16 sd BW 9 min BH, rental.
Suggestions for preventing waste result from home discussion and methods of preventing waste are worked out.

War Against Waste
16 sd BW 20 min BH rental.
Saving and reclamation of all kinds of waste materials in modern industry.

Power of a Minute
16 sd BW 15 min Dartnell rental.
A morale film showing the fatal effect of delays along the production line.

(Employee Instruction)

Instructing the Worker on the Job
16 sd BW 14 min U Ia and BH, rental; Castle sale.
A new girl worker is told how to do a job on the drill press. She fails to master the job and is then shown how to do it. This does not work and in distress she leaves the machine. The supervisor then does a careful job of instructing the next girl who becomes a competent operator. Thus the difference between telling, showing, and instructing is made clear.

Four Steps Forward
16 sd BW 29 min BH rental.
A four point system for instructing new employees as applied to Navy civilian personnel, dramatized.

Passing the Know-How Along
16 sd BW 15 min JH.
Demonstrates seven tested and logical steps that help in passing along job information. Training tecniques as applied to lathe operation are shown, but the principles apply to bench work, welding, paint spraying, assembly, and any other work in the factory.

Using Visual Aids in Training
16 sd BW 14 min BH and U Ia rental; Castle sale.
An instructor, teaching his classes the use of the micrometer follows a carefully planned procedure involving the use of visual aids units; that is, a training motion picture, a coordinated filmstrip, and an instructor's manual.

(Time and Motion Study Films)

Motion Study Principles
16 sd BW 21 min BH rental.
Important principles of motion economy applied to sub-assembly packing.

Motion Study Applications
16 sd BW 21 min BH rental.
Classification of common hand motions and their regulation to develop better and easier methods. Pin board assembly, folding cartons, assembling ice cube grids, stuffing envelopes.

Motion Study in Action
16 sd BW 18 min BH rental.
Film record of outstanding projects at University of Iowa management courses, "before and after" motion analysis records of twelve widely varied operations with time savings ranging from 28% to 225%.

(For a complete list of motion study pictures and motion study courses accompanying, write Prof. Ralph Barnes, University of Iowa, Iowa City, Iowa.)

(Other Films Applicable to Textile Operations)

Principles of Lubrication
16 sd BW 16 min Castle sale. Accompanying film strip.
Explains through animation why lubrication is necessary, the physical properties of lubricants, lubricants in action, viscosity of lubricating fluids, and basic lubricating requirements.

Basic Principles of Lubrication
16 sd BW 25 min GM loan.
Explains the principles and functions of proper lubrication, to reduce friction in order to increase efficiency, to cool moving parts and internal surfaces, to keep power in the cylinder, and to prevent contamination and deterioration of engine parts.

Lubrication
16 sd BW 30 min USBM loan.
Demonstrates theory of friction and practical application of lubricants, varying degrees of friction, operation of machinery and uses of lubricants. Shows various types of oils and applications, and displays range and uses of petroleum lubricants, and how lubrication reduces work, wear, and waste.

The Inside Story
16 sd BW 45 min SocVac loan.
Basic principles of bearing, gear

A NEW PICKER STICK THAT Lasts 15 Times as Long AS HICKORY!

Cap. 1: This is the actual photo of a Plyweld Picker Stick which made 32,000,000 picks in eleven months before it failed. The other twenty-four sticks in the same installation were still going strong.
FORMICA
TRADE MARK REG. U.S. PAT. OFF.

PLYWELD Picker Sticks as manufactured and distributed exclusively by the E. H. Jacobs Manufacturing Co., Inc., are one post-war dream for textile factory maintenance men which has come true. Users of this stick report that it lasts from 15 to 20 times as long as hickory—avoiding shut downs and saving labor that really counts for something.

These sticks, cut from Formica "Pregwood" sheets, are much harder and more abrasion and wear-resistant than hickory. They will break before the casting in case of a jam. There are fewer cloth smashes and delay—less loom fixing. They are uniform in give and elasticity. No warping because of moisture absorption. Lug straps, sweep sticks and power sticks, straps and other attachments last longer because of better boxing of the loom and less "slamming off".

Manufactured by

The E. H. Jacobs Mfg. Co., Inc.

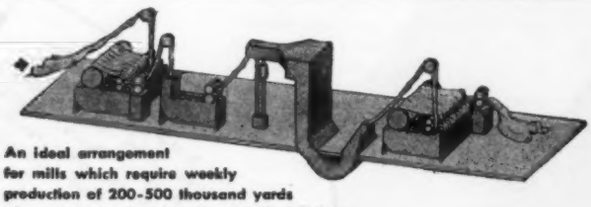
Danielson, Conn. Charlotte, N. C.

THE FORMICA INSULATION CO., 4635 SPRING GROVE AVE., CINCINNATI 32, OHIO

DU PONT

has a Continuous Peroxide Bleaching System for most bleaching needs

ONE-STAGE ROPE SYSTEM



An ideal arrangement for mills which require weekly production of 200-500 thousand yards of goods averaging 3 yards/pound or lighter.

ONE-STAGE OPEN-WIDTH SYSTEM

For production requirements of 150-300 thousand yards/week of goods that cannot be rope-processed—especially successful with a wide range of heavy fabrics.

LOOK INTO THESE SYSTEMS NOW!

You'll find them . . .

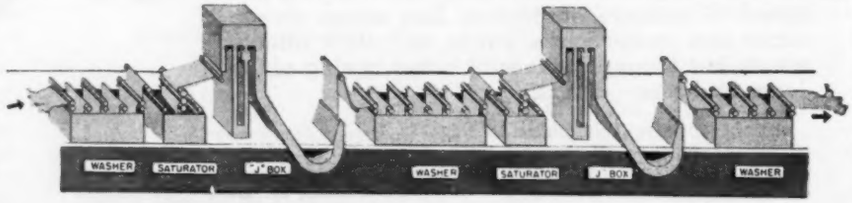
1. **Just what you need** to produce quality bleaching at lower over-all costs.
2. **Flexible**—readily adapted to speedy, uniform processing.
3. **Easy to set up,** operate and control.
4. In use by **many leading mills.**

TWO-STAGE ROPE SYSTEM

For processing a wide variety of fabrics; print cloths, sheetings, shirting, shade cloth, etc.; handles 1-¾—1-½ million yards/week of 4 yd. goods.

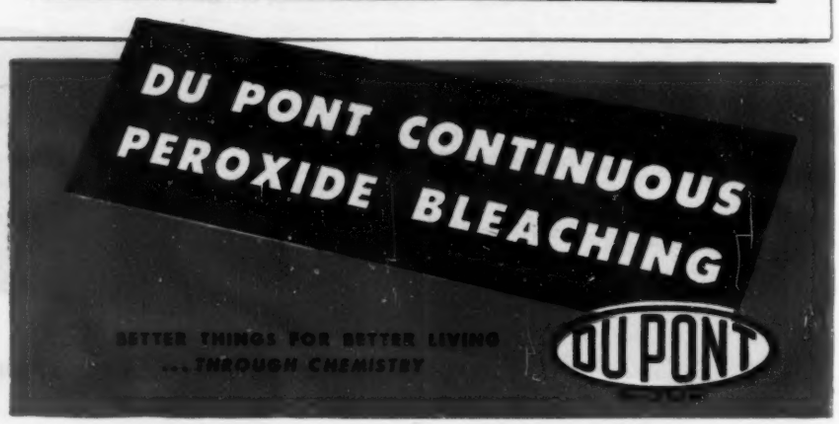
TWO-STAGE OPEN-WIDTH SYSTEM

For cloth that cannot be handled in rope form. Operating speed generally between 75 and 125 yards/minute. Any degree of bleaching obtained by adjusting peroxide strength.



Send for this NEW BOOK!

It shows typical continuous bleach layouts designed to fit the requirements of various plants. For a copy just write: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.



and cylinder lubrication. No advertising matter.

The Micrometer
16 sd BW 15 min U Ia
rental plus T.
Explains the basic principles on which the micrometer works.

Principles of Electricity
16 mm sd col 20 min GE loan.
Using animation extensively, this film introduces an unusual technique in teaching the principles of electricity. It breaks down the structure of matter into atoms, and by the use of conventional symbols shows the action of electrons within an atom. Principles involved in flow of current are explained, and volt, ampere and ohm are defined. Magnetism and magnetic fields as applied to motors are also covered by animation.

Principles of Gearing
16 sd BW 18 min Castle sale.
Accompanying filmstrip.
Explains the laws of gearing, positive driving, generating involute profiles, pressure angle, generating cycloid profiles, velocity rates, and circular pitch.

The Magic of Fluorescence
16 sd col 17 min GE loan.
Following a brief introduction to the principles of luminescence, fluorescent lighting is explained, and the manufacture of the fluorescent lamp described. Successive steps show the construction of the phosphor lined tube, the mounts as they are made and sealed to the ends of the tube, the precise amounts of mercury and argon gas injected, the lead wires attached, and the completed lamp being treated, seasoned and tested.

Color Conditioning in Industry
16 sd col 25 min DuPont loan.
Shows development and theory of color conditioning, and useful application in industry.

FILM STRIPS

Supervisory Development Program

35 sd BW Vocafilm, with manuals.
A series of talking slide films for development of supervisors.
Series A: 13 films:

1. OFF TO THE RIGHT START
   Inducting the new man. Correct first impressions can be planned. This vital step shows the wrong way, then the right way to induct men. The principles apply whether the man is new to the plant, new to the department, or new to the job.
2. THERE'S A JOB TO BE DONE
   Planning job instruction. The instructor must have a job breakdown. We see how to plan a new man's instruction to get him up to standard production safe, quick, and with a minimum waste of materials.
3. ONE STEP AT A TIME
   Why waste time unnecessarily when teaching a man a new job. Step 3 shows how to bring him along in the fastest possible time. It shows your seasoned men the one best way to pass on their skills.
4. LET'S FACE THE FACTS
   Planning for safety. This step outlines the foreman's responsibility for preventing injuries. It offers a plan to spot all irregularities, all errors in production, before they cause injuries, unnecessary waste of material, damage to equipment, or tie-ups in production schedules.
5. DO THE JOB RIGHT
   Selling safety. Safety is explained, not in terms of a safety campaign, but as a year-round method of maintaining safe, dependable, efficient production schedules. We learn how to convince men that this is a daily responsibility of the whole operating gang.
6. THE MAN BEHIND THE MACHINE
   This step shows how to get standard results from each gang, each man, despite variations in temperament. It outlines methods of dealing with hard-to-handle types, how to spot each man's trouble and correct it.
7. THE BALANCED JOB
   This film suggests a procedure for scheduling the important jobs, day by day, for delegating responsibility and for gaining a proper balance on all activities. It is the answer to the "haven't time" alibi.
8. IT TAKES TIME
   The foreman who misses out as a manager of men—who lacks leadership—needs this help. Here is a step-by-step procedure which will put a foreman close to his men, gaining their full confidence.
9. WHEN SOMETHING GOES WRONG
   Here we have a foreman who was too busy to tell his men "why." They lost interest in their work. When he took time to remove all the blindspots, he was rewarded by cooperation. He was able to restore interest in the jobs.
10. LET'S TALK THINGS OVER
    This film outlines the wrong ways to check up on a man and his work, then shows the correct method by which a man's weak points can be corrected.
11. THE RIGHT MEDICINE
    Reprimands that leave a man resentful may wreck human relations in an entire department. Here are the proper steps in giving a reprimand, for they correct the fault, yet leave the man a better workman.
12. HANDLING GRIEVANCES AT THEIR START
    When foremen grasp their full responsibility for preventing grievances, and begin to use a four-step technique for handling employee problems at their source, grievances become few and far between.
13. WOMEN ON THE JOB
    Answers problems of supervision of women in industry.

Series B: Eight films:

1. FREEDOM OF OPPORTUNITY
   Deals with the purpose of business and the nature of competition—both direct and indirect. Shows how—in an economic democracy—the consumer's freedom of choice dictates price, rate of production and standards of quality, and points out that management must control cost, quality and quantity to win consumer favor and provide jobs.
2. EFFECTIVE MANAGEMENT
   Problems affecting the control of cost, quality and quantity arise from one of four factors—personnel, method, material, or equipment. Presents the principles of organization and management and identifies the supervisor as head of one of a number of small businesses whose combined activities constitute an industrial enterprise.
3. INDIVIDUAL OUTPUT
   Concluding the problem-determining group of discussions. Points out that the overall accomplishments of any organization can be no better than the collective accomplishments of the individuals involved. Focuses attention on the individual employee, and introduces a simple valve analogy which establishes a blueprint for the study of each man in relation to his job.
4. WHEN YOU'VE GOT A PROBLEM
   First of two films which train the foreman in the process of problem analysis, reaching decisions, and getting action. A basic drill in the steps involved—getting all the facts, weighing and deciding or getting a decision, examining causes of difficulties: materials, equipment, methods, capacity of employees, employee attitudes—taking or obtaining action—checking results.
5. GETTING IDEAS ACROSS
   Deals with the question of obtaining decisions or getting action from others—whether they be superior executives, fellow supervisors, or workers. Provides a four-step stairway to the successful transmission of ideas, plans, or instructions: (1) Stating the problem and the obstacles, (2) Offering the solution, (3) Giving the reasons for the decision, (4) Stating the anticipated results, problem, solution, reasons, results.
6. THE WILL TO PRODUCE
   First of three discussions deal-

UNBRAKO SELF-LOCKERS

Reg. U. S. Pat. Off.

They dig-in and "stay put"

PAT'D AND PATS. PEND.

Self-Lockers—because their knurled cup points dig in and *stay tight*—even when subjected to the most chattering vibration. Yet, they can be backed out with a wrench and used *again* and *again*. That's why so many millions of these tough, dependable "Unbrako" Socket Set Screws with the Knurled Cup Points are used in industry. For complete information about these and other "Unbrako" Socket Screw Products . . . write for the "Unbrako" Catalog.

These "Unbrako" Screw Products are available in sizes ranging from No. 4 to 1½" in diameter and in a full range of lengths.

"Unbrako" and "Hallowell" Products are sold entirely through Industrial Distributors.

Knurling of Socket Screws originated with "Unbrako" in 1934.

KITS PATS. PEND.

You can't tighten or loosen socket screws without a hex socket wrench, so why not get our No. 25 or No. 50 "Hallowell" Hollow Handle Key Kit which contains most all hex bits.

"Unbrako" Socket Head Cap Screws with the knurled head save assembly time because the knurling provides a slip- and fumble-proof grip—though the fingers and head be ever so oily, therefore, they can be screwed in faster and farther before it becomes necessary to use a wrench. They can also be locked in place if heads are countersunk.

PAT'D AND PATS. PEND.

The "Unbrako" Socket Set Screw with Knurled Threads (B) is a most excellent Self-Locker, too, because the knurling, as shown, swages the threads when locking results. To be used with points such as: flat, dog, cone and oval which do not lend themselves to knurling.

OVER 44 YEARS IN BUSINESS.

STANDARD PRESSED STEEL CO.

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ing with human nature and the job . . . exploring the nature and causes of satisfaction or dissatisfaction felt by employees in relation to the day-by-day job situation. Shows how the supervisor's actions control employee attitudes and leads up to a detailed study of the basic human traits which the supervisor must take into account. Attitude is determined in large part by a person's feeling of security, job satisfaction, and recognition.

7. UNDERSTANDING PEOPLE
Probes the relationship between employee satisfaction or dissatisfaction and the human motives which influence these attitudes. Examines the basic wants and urges which determine what the individual seeks from life and from his job. Provides a detailed study of the desire for security and the desire for satisfaction in the job through which the individual earns his living. Shows that a person's feelings are an integral part of the ability to do the job. Provides a pattern to help the supervisor understand the reasons for differences in human behavior. Only by knowing his people, and what makes them tick, can a supervisor learn how to help them do their best.

8. INDIVIDUAL ADJUSTMENT
Shows how the supervisor uses his knowledge of individual wants and feelings to remove obstacles to production. Outlines preventive measures that tend to keep these obstacles from arising. Reviews points of helping the man adjust to his job . . . helping adjust the job to the man . . . helping adjust the man to himself . . . resolving inner conflicts that keep a man from doing his best . . . using knowledge of human nature in solving problems and getting ideas across. Stresses importance of getting all the facts, including those that concern individual feelings . . . weighing all the facts, etc. . . . and giving consideration to individual wants and feelings in stating problem, solution, reasons, and results.

The Cost of an Error
35 sd WD loan.
FS 80-1 Part 1: Demonstrates the training of the worker for his job, and the effectiveness of the job instruction program in accomplishing this.
FS 80-3 Part 2: How to spot immediate training needs.
FS 80-4 Part 3: The importance of the breakdown and how to make it.
FS 80-5 Part 4: The four steps in instructing the worker effectively with the least effort.

Stop, Look and Question
35 sd WD loan.
FS 80-8. A demonstration of time and labor-saving improvements resulting from application of job methods.

Foundations for Good Job Relations
35 sd BW WD loan.
Shows how each of the four foundations makes for more harmonious relations between worker and his superior.

Some Principles of Teaching
35 si or sd BW 56 frames JH sale.
Seven suggestions on how the teacher can help shorten the learning process.

All Together
35 sd BW 87 frames MacVeagh sale.
Demonstrates the necessity for teamwork. Shows the loss of time, money, customer goodwill, and future business caused by lack of cooperation between departments.

Big Little Things
35 sd BW 81 frames JH sale.
Here the general subject of ideas, suggestions, complaints, and grievances is taken up with successful ways to listen to them, so that men will be satisfied. Also explains how to do something about worker attitudes.

Fair and Cool
35 sd BW 67 frames JH sale.
Covers the foreman's responsibility for and obligations to his men. Many suggestions and tips for handling men tactfully and diplomatically are also made.

Foreman Training
35 sd BW Six films Comm sale.
Created from actual tested experiences of foremen and supervisors: (1) All together, (2) Safety pays, (3) Men at work, (4) Nickels and dimes, (5) Figures and facts, (6) This way up.

FILM STRIPS

Men at Work
35 sd BW 97 frames MacVeagh sale.
Discussion by a superintendent of the qualifications for leadership, the prerequisites of successful foremanship.

New Men at Home
35 sd BW 73 frames JH sale.
The supervisor's or foreman's obligation to the new employee, with suggestions to make him feel at home on the job and consequently take pride in his job.

Preparing for the Future
35 sd BW 66 frames JH sale.
Explains to foremen why it is important to develop qualified understudies to put himself in line for promotion. Suggestions are made for selection and development of these understudies.

Waterproof Fabric "Breathes"

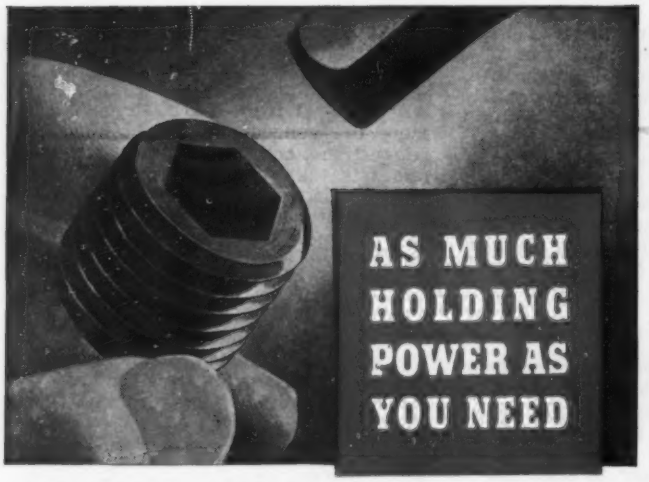
Ventile, a waterproof fabric that was developed at the Shirley Institute (headquarters of British textile research) and used by the armed forces during the war, is reported to have the outstanding feature that it not only gives protection against water, wind and cold, but allows passage of air and water vapor outwards, according to a recent announcement by British Information Services. Moreover, while ordinary rainproof cloth exposed to three inches of rain would allow water to penetrate in ten minutes, it is claimed that Ventile cloth, when exposed to conditions corresponding to nine inches of rain for 30 minutes, allowed no water at all to penetrate.

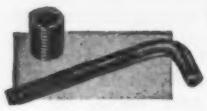
These results are said to have been achieved by working accurately to specification at every stage of manufacture, and the final result is due equally to the spinning, close weave and partial proofing. In the finer range, yarns soft and twisted are given a close Oxford weave to produce a light fabric with minute interstices that close as the cotton swells when wet. Proofing does not gloss the gaps, and the cloth can breathe.

Ventile is made in various weights, the lightest weighing 4¼ ounces per square yard. It can be washed or dry-cleaned without its properties being affected, according to the announcement.

Heavy overseas demand is expected for Ventile, above all from those territories where rainfall is heavy. The trade mark has already been registered in 14 countries and application has been made in 11 others. The United States is not one of these, and an alternative trade mark is being applied for here.

It is understood that information about Ventile was received in this country under Reverse Lend Lease, but it is stated that American samples tested in Manchester have not been equal in construction or performance to the British product. This is especially the case in the lighter types of cloth. It is understood that the difficulty lies in the spinning.





Whether a "hex" socket screw is right for your fastening, or—because of small size of components, vibration conditions or ease of disassembly—the BRISTO "Multiple-Spline" is needed, you get *maximum strength* from Bristol's "B-Line".

Both the "Hex" and "Multiple-Spline" socket screws represent careful, correct design by Bristol engineers. In addition, Bristol's system of raw material control *keeps* quality up to rigid standards. And Bristol's inspection methods, which include tests for hardness and ultimate strength, gauging for precision of lead and pitch—plus a final visual inspection before packing—result in "Hex" and "Multiple-Spline" screws that feature maximum strength . . . uniformity . . . accuracy.

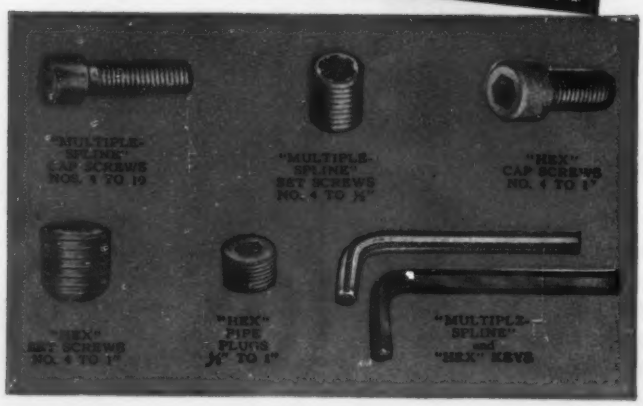
For extra security—at no extra cost—select the right style from the Bristol "B-Line"—made by a manufacturer with 33 years' experience in socket screws. Order from your distributor. THE BRISTOL COMPANY, Mill Supply Division, 125 Bristol Road, Waterbury 91, Conn.

WHY "MULTIPLE-SPLINE" MEANS TIGHTER

NO EXPANDING PRESSURE: THE KEY PULLS THE SCREW AROUND

Only the "B-LINE" has the right socket screw for every application

The BRISTOL Company
MILL SUPPLY DIVISION


"MULTIPLE-SPLINE" CAP SCREWS NOS. 5 TO 10
"MULTIPLE-SPLINE" SET SCREWS NO. 4 TO ½"
"HEX" CAP SCREWS NO. 4 TO 1"
"HEX" SET SCREWS NO. 4 TO 1"
"HEX" PIPE PLUGS ⅛" TO 1"
"MULTIPLE-SPLINE" and "HEX" KEYS

"Here's What We Want in a Dyebox," said Textile Dyers

1. Less time for loading, heating, lacing, doffing, cleaning.
2. Greater saving of steam and water.
3. Production of cleaner, higher quality work.

And Here's the Box We Designed

As specialists in fabricating stainless steel textile equipment, we present this new dyebox for quality dyeing. It assures all the time and money savings that dyers demand in new equipment — all the convenience of an open type box combined with the advantages of a fully enclosed box.

The NEW BLICKMAN DYEBOX

Stainless Steel and Fully Enclosed

Write for further information

S. BLICKMAN, INC.

207 GREGORY AVENUE • WEEHAWKEN, N. J.

Manufacturers of stainless steel textile equipment, dye boxes, linings, cylinders, dry cans, rolls, hoods, tanks

Afghan made entirely from 5-gram matched samples gathered from National Aniline's nationwide application laboratories.

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SPECIFY *National Aniline Dyes*

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Personnel Training

Emphasized at Spray STA meeting

Mr. Henderson Dr. McGehee

Left to right, J. G. Shedd of Dan River, vice-chairman of the Northern North Carolina-Virginia Division of STA; Howard Barton of Fieldcrest, secretary; and J. B. Powell of Erlanger, chairman.

"THE GOOD THINGS in life can come to the people in our country as a whole only in exact proportion to the productivity per man hour," declared Raymond E. Henderson of Dan River Mills, Inc., Danville, Va., as he addressed members of the Northern North Carolina-Virginia division of the Southern Textile Association during its spring meeting in the Central Y. M. C. A. at Spray, N. C., on June 7.

Continuing his talk, the subject of which was "Productivity vs. Living Standards," Mr. Henderson warned that if productivity per man hour decreases through the restriction of the further development of labor saving devices and new techniques, then the standard of living will decline and nothing can stop it.

In conclusion, Mr. Henderson advised the group of operating executives to avail themselves of all the latest methods, techniques and devices, and stated that if they do not take advantage of these things, they are not doing their duty to their country, their communities, their workers, and their employers.

Approximately 200 mill men were present at this the first meeting of the year which was presided over by Chairman J. B. Powell, of Erlanger Cotton Mills, Lexington, N. C. After the invocation by J. O. Thomas, assistant director of industrial and public relations at Fieldcrest Mills, the group was welcomed to Spray by H. W. Whitcomb, divisional vice-president and assistant general manager of Fieldcrest. A response to Mr. Whitcomb's welcome was presented on behalf of the group by Smith Crow of Erlanger Cotton Mills, Lexington, North Carolina.

J. G. Shedd, also of Dan River Mills, Inc., introduced Mr. Henderson. Following a discussion of some facts brought out in Mr. Henderson's address, Mr. Thomas presented Dr. William McGehee, director of personnel research at Fieldcrest, who spoke to the group on the subject "Vocational Education for Textile Supervisors and Workers."

Emphasizing that the ultimate responsibility for training must rest upon the line supervisors, Dr. McGehee informed the group that all that any training staff can do is organize procedure, furnish training aids, compile records, help evaluate training, teach certain specialized subjects, and assist in instructor training.

Experimental literature on training should be studied, he said, indicating that all of this material is certainly not pertinent to the training of textile employees but that a sufficient amount of it is, to warrant serious consideration.

Dr. McGehee cited several factors which have been found fundamental with regard to vocational education of textile employees. Following are some mentioned:

(1) Motivation is necessary in learning. The employee must be instilled with a desire to learn. Praise instead of blame must be used. Incentives must be varied in order to keep them effective.

(2) The learner must be guided in the initial stages of training. This is necessary to prevent his establishing bad habits.

(3) The time element plays an important part in learning. Often times it is found that persons being trained can learn more by spacing out the training.

(4) Methods of presentation must be studied. The relative values of visual aids, demonstrations and lectures is not definitely known yet.

(5) The reason why things are to be done and why they must be done a certain way must be explained to the learner.

(6) Learning must start with what the person already knows. Instructors must understand the importance of tacking on to what the learner already knows that which the teacher is trying to put across to him.

"We need to train workers not only in skills and knowledges but in the attitudes of good workmanship and good American citizenship," concluded Dr. McGehee.

Dye Method for Testing Maturity of Cotton Fibers

Chemists at the Department of Agriculture's Southern Regional Research Laboratory, in New Orleans, have developed a differential dyeing procedure which demonstrates the maturity of cotton fibers. It is reported to be based on the facts that mature cotton fibers are thick-walled and immature ones thin-walled, and that thick- and thin-walled fibers take the same dyes differently and also take different dyes. The test is said to be easily made on unprocessed cotton lint in the laboratory or dyehouse. When fully perfected, the method should have wide usefulness.

A mixture of dyes of contrasting colors, red and green, and of different dyeing properties, is used in a standard method of dyeing. The thick-walled, or mature, fibers dye definitely red, whereas the thin-walled fibers, commonly called immature, dye a distinct green. As a result, differentiation is easy.

The test may be used to trace the progress of fiber development on the seed, for comparing commercial cottons of different growth varieties, or to indicate to cotton mills certain lots of cotton which require special care in the manufacturing processes or in dyeing, according to Louis B. Howard, Chief of the Bureau of Agricultural and Industrial Chemistry, which operates the New Orleans Laboratory. When fully perfected, this new differential dyeing method should facilitate the estimation of average maturity by means of the resulting total color effect. Good qualitative correlation has already been observed in a set of dyed samples containing from 78 to only 22 per cent of mature fibers.

Only Few Textile Machines at British Fair

Weston pirn winder, one of few British textile machines for export.

THE BRITISH Industries Fair was held in London and Birmingham (U. K.) May 5-16, signifying that the United Kingdom will again make a bid for world markets. The Fair had been planned even while the country was still at war, but according to a correspondent, there was a noticeable absence of textile machinery as compared with previous years, due in part to the government's policy of providing the country's textile industry with necessary equipment instead of bidding for export markets in this particular field.

Though not even a prototype was available during the Fair, a hand spinning frame with 20 spindles has been designed for the Indian trade. It will be made of light aluminum alloys, will be movable, and will be operated by one man.

Both power and hand silk reelers are being commercially produced for foreign trade.

The pirn winder manufactured by Weston (Engineers) Ltd., was said to have been released for export trade. Weston is a comparative newcomer to the textile manufacturing field, but is said to be working to improve on other foreign pirn winders and to be incorporating certain features discovered in recent German research.

The machine has ivory colored enamel and chromium plated parts. Spindle speeds are 4,000 rpm and in some instances 6,000 rpm, with build from 1¼ to 2¼ inches. It embodies the use of oil-impregnated bearings. Bunch length is adjustable. The spindle on this machine operates at constant speed, the automatic yarn tension compensator taking care of the difference in diameter size.

The motor is totally enclosed and drives two shafts through the medium of three-step pulleys and round rubber belts. One shaft drives the headstock and the other the thread guide and yarn tension compensator.

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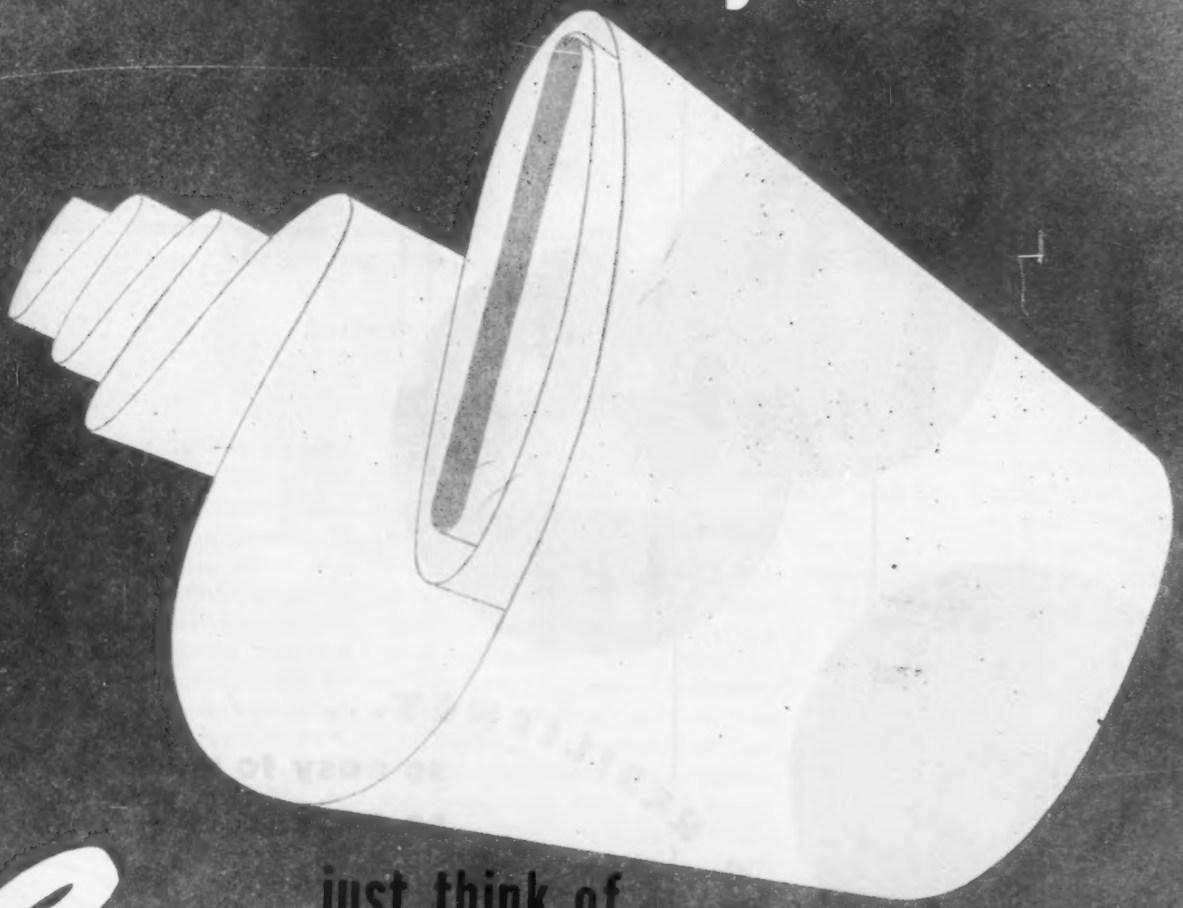

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Cotton Warp Sizing

By PAUL V. SEYDEL, D.Sc.

Analysis and Testing of Material for Sizing Analyses

Article 9

IF GENIUS is an infinite capacity for taking pains, no one has this quality more developed than a good analytical chemist. Of course a good one is as scarce as a real genius. When a chemist solves the problem of identifying the different ingredients of a complex mixture of organic compounds, he has performed a task worthy of much greater praise and reward than he generally gets.

My father once was asked to duplicate a sizing mixture exactly. He would have hesitated to do so if it were not that for excellent reasons he knew the exact composition of it, being the inventor of its formula.

He first examined it, and the examination indicated it had not changed since the day he was familiar with its manufacture. He then duplicated the formula and methods of mixing, reactions, and temperature control on all details of which he had carefully kept in notes so that the sample and his duplicate looked very much alike.

In order to convince the client that the duplicate was perfect, he took a quantity of both to an experienced analyst, in whom he had great confidence, and told him he wanted a report showing the difference, if any. The analyst asked him many questions, which a man with less knowledge and reputation would have had too much false pride to ask. To simplify his work, my father told him exactly what to look for and simply to determine proportions.

After a week he called my father up and told him that in spite of diligent efforts he could not identify all the ingredients he had been told to look for. My father conferred with him, checked up on his results, made a few suggestions, and the chemist went back to work. At the end of another week he offered his report, which read substantially as follows:

"The two samples submitted have been analyzed and without guaranteeing the accuracy of findings, the proportions of the following ingredients have been found. . . . I am inclined to believe that the composition of the two samples is identical."

Next time my father saw him he told him to send in his bill. He said, "Seydel, the time I spent on this is more than I care to charge you for. I enjoyed the work and you taught me a thing or two, but do not give me another job like it unless you are prepared to pay two or three hundred dollars for it."

And this was in spite of the fact that he had been told what to look for and how to do it and just to determine the proportions. What would he have said had he been compelled to grope in the dark?

Analyst Has Difficult Job

If the average analyst tried before turning in the result of his analysis, to make a sample of the goods according to his findings, he would find out how far off he is in nine cases out of ten, especially if he tried to obtain identical results with it, by actually using his material in a practical test.

I might be able to explain why

The laboratory must be adequately equipped for analysis work.

Courtesy, Seydel-Woolley & Co.

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the Whitin-Schweiter Automatic Filling Bobbin Winder proves itself best-by-test among competitive winders

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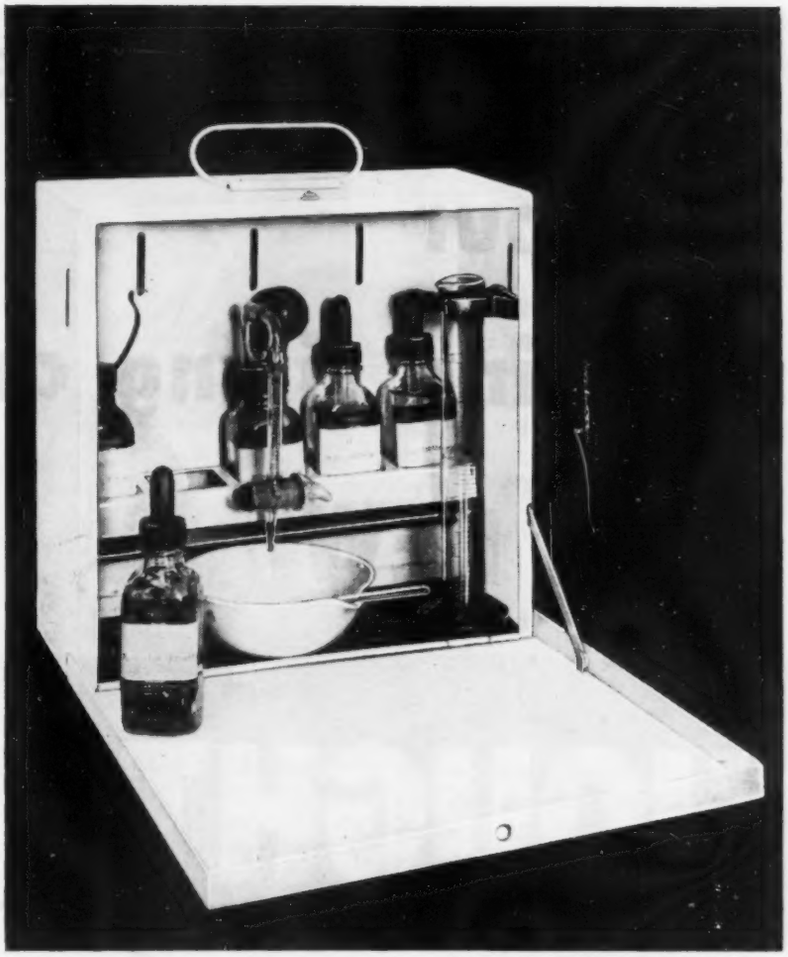
some chemists find materials that are not present and do not find the ingredients that are actually there, but this would involve me in too technical a discussion for the object of this series. Anyone who wishes to spend a few dollars to see for himself what difficulties lie in this sort of analysis need only to send duplicate samples of the same sizing compound to several different highly reputable analytical laboratories, requesting determination of the kind and amount of constituents, without any further explanation. The cost of the analysis would be one indication, and when he tried to compare the results, he would begin wondering if he actually sent the same material to the different laboratories. And unless one laboratory had had experience with this type of material, they would probably all be more or less inaccurate.

Why "Analyses" Are Misleading: The purpose of my comments is simply to state that we must not accept the claims of an analyst who declares that he can identify accurately the component parts of a complex mixture of organic compounds, or even one who claims to be able to make an approximate guess without going to so much trouble that the charges for his work would be prohibitive. We may readily determine the elements but quite often will fail when reporting the combination of these elements.

To make this clear, let us cite an example. An analyst may report a compound to contain glycerin. The glycerin may have been in combination as it is in tallow or it may have been free, and this makes all the difference in the world as to its properties and value as a sizing ingredient. In this particular case, the glyceride called tallow is merely a softener or lubricant, insoluble in water, whereas glycerin is a deliquescent highly soluble in water and is no lubricant.

The chemist divides materials in three groups, (1) elements, (2) compounds, (3) mixtures. Elements are readily identified. The second class is very numerous, but its units are perfectly definite in composition. The third is of course extremely numerous. There is no fixity in its members which often makes it extremely difficult, if not impossible, to identify their nature.



Courtesy, TruTest Laboratories, Inc.

Portable water testing unit, handy for running quick tests on water that may have changed due to temporary condition.

Sizings are often very complex mixtures and from their nature very hard if not impossible to analyze accurately, even approximately. It is next to impossible to determine accurately the proportions of a mixture of fats and of gums if it is composed of fats that are very similar chemically.

There are dozens of gums, all derived from starch, which are equally as hard to identify. Once cooked or chemically treated, it is next to impossible to differentiate between potato starch, tapioca starch, corn starch, and the gums produced with them, especially if they are mixtures of different starches and gums. Fats also can be bought from 2c to over $1 per pound with about the same amount of variation in their properties, so percentage total fats does not tell the story either. Nor are the more expensive fats always the most suited.

The analysis of a sizing compound is valuable to check on whether successive shipments are similar as to proportions of such ingredients as total fats, total moisture, etc., but is a very poor indication of the money value or the efficiency of the compound.

Interpretation of Results. The interpretation of results of analyses is a study in itself—a sort of combination art and science, plus a little intuition and a lot of experience. Even the most experienced sizing expert would not claim to be able to judge the efficacy of a size compound from its analysis alone.

The amount of fats alone in a size has no more relation to its effectiveness than has the amount of oil in the crankcase of your car. If the oil in your car happened to be linseed oil or kerosene, even

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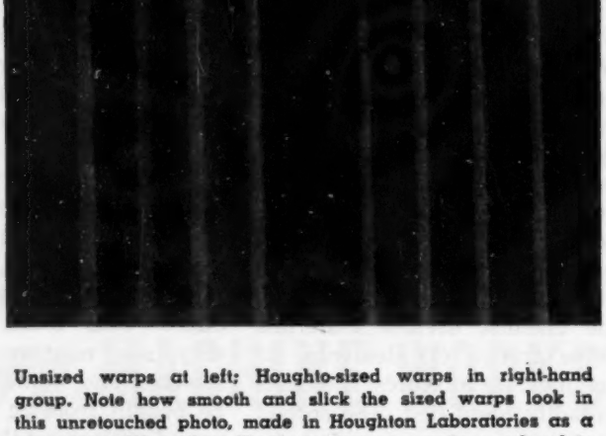

Unsized warps at left; Houghto-sized warps in right-hand group. Note how smooth and slick the sized warps look in this unretouched photo, made in Houghton Laboratories as a part of the Warp Size Check-up Test—a service rendered to mills on request.

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though the crankcase were full, you would not expect your bearings to last long.

Proof is in Weaving

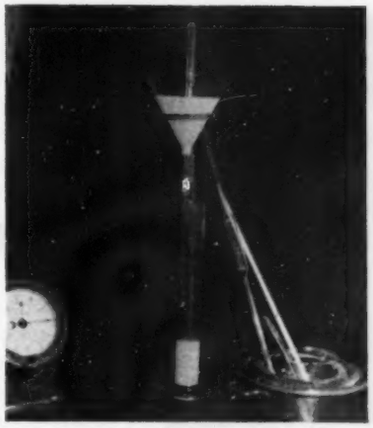
The only valid test for size materials is in the weave room. Even there it is difficult to determine small differences in materials by short tests. As an engineer in constructing a bridge allows a certain safety factor to take care of extreme conditions, properly prepared sizing materials are made to do more than the absolute minimum that would be required of them under perfect weaving conditions. Only experience will tell how much safety factor to allow for variations in cotton, in carding and in spinning, as well as for the human factor in processing.

It is the continual appearance of these variations which makes determination of small differences in sizing materials difficult even in the weave room over short testing periods. Here is brought out what a certain pharmaceutical manufacturer speaks of as the "priceless ingredient"—the integrity of the manufacturer. This item, as important as it is, will show up in no kind of analytical scheme.

This definitely does not mean that analysis of materials is a waste of time. Far from it. In the same way that a mill man tests his cotton to check its uniformity, he should run regular tests on his sizing materials—to be sure they are uniform.

Certain of the materials used in sizing lend themselves readily to checks for uniformity. Practically all materials that are single entities can be fairly well evaluated. Uniformity in physical characteristics and in chemical composition should be demanded of all suppliers. A discussion of the subject of analysis of textile chemicals together with a fairly complete bibliography is given by J. F. X. Harold in "Textile Research. A Survey of Progress," M. I. T. Technology Press, 1932.

Herewith are given a number of tests that can be carried out without too much layout for chemical equipment and chemist's time. In describing these, it is assumed that the user has a basic knowledge of and experience with general chemical analysis and access to the more familiar chemical literature. On this assumption, the methods are not given in detail. The latest editions of the following works are practically essential to any extensive work in this field:



Equipment for alkali fluidity tests of starch.

"American Society for Testing Materials Standards," Part III. Nonmetallic Materials. General.

"Standard Methods of Chemical Analysis." Scott, D. Van Nostrand.

"Yearbook of the American Association of Textile Chemists and Colorists."

"Handbook of Chemistry and Physics," Chemical Rubber Publishing Co. or Lange's "Handbook of Chemistry," Handbook Publishers, Inc.

"Textile Testing." J. H. Skinkle. Chemical Publishing Co.

"Federal Specification for Textiles; General Specifications, Test Methods." CCC-T-191a. U. S. Govt.

Starch. Starch may vary in cleanliness, moisture content, pH, viscosity, and in several other qualities more difficult to test, such as adhesiveness and film-forming properties. The standard brands of starch purchased from reliable manufacturers are about as uniform as anything the mill man can buy. Even these, however, may vary in moisture content if not properly stored.

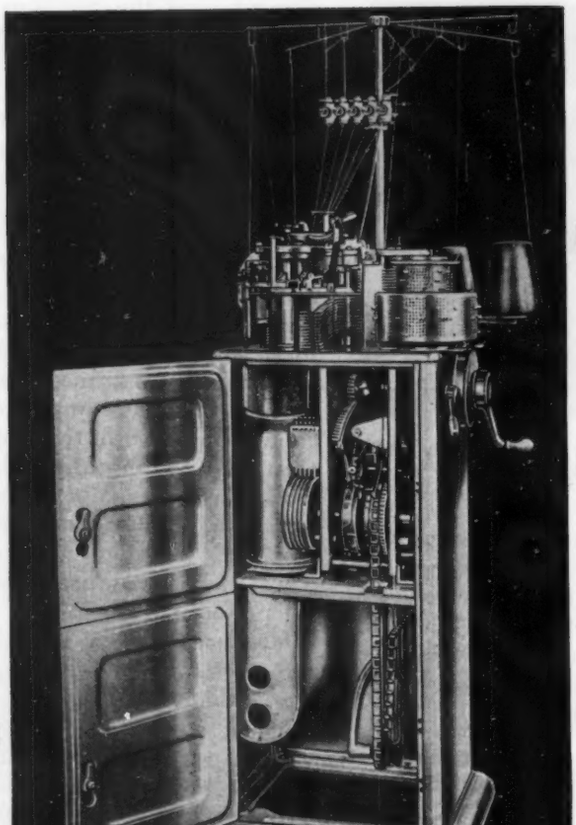
Viscosity will vary greatly from one starch to another, particularly in the modified starches, each manufacturer having his own standards and his own test methods. Testing of viscosity by determination of alkali fluidity is simple and requires little equipment, but the accuracy of the test is greatly dependent on the human element, and the test should be carried out by a careful technician.

The method used to test alkali fluidity of starch is preferably that recommended by the supplier. One of the most popular standard methods consists of making a cold paste by a definite method in 1% caustic soda of two grams of thick-boiling or five grams of thin-boiling starch, allowing this to stand for a stated period at a definite temperature, and measuring the amount that will flow through a calibrated funnel in the same time required by 110 cc of distilled water at the same temperature. Such a method, of course, does not give results in absolute units of viscosity, but is very useful for testing uniformity.

Moisture. The amount of moisture present will, of course, affect the amount of actual starch weighed out by the size maker. Where storage conditions may affect the moisture, this should be tested regularly by the following method:

Weigh ten grams of starch accurately into a 250 cc Florence flask with a ground glass joint. The flask is then half-filled with xylol, fitted with a moisture trap and a reflux condenser. Bring the xylol slowly to a boil. Reflux slowly for five or ten minutes until collection of water in the trap has slowed. Then boil vigorously for a half hour. Read the amount of moisture from the graduations on the trap. Continue boiling for ten minutes and read again. Continue this until a constant reading is obtained, cool the trap to room temperature and make reading, and then calculate the moisture in the starch. If water tends to stick to the reflux condenser, dislodge the drops with a piece of copper wire having a small loop or hook at the end.

For accurate work, the xylol should be prepared as follows: Shake one gallon of pure xylol with 100 cc of water. Let stand with occasional shaking for several hours, then decant the xylol from the water. Distill, discarding the first and last 10 cc. It is now ready for use. Xylol at its boiling point holds a small amount of moisture, so that if it were too dry, the re-



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sults would be too low; if it were saturated at room temperature, it would lose some at its boiling point and the results would be too high.

Reading of the graduations must be done with great care to avoid the effect of parallax—the technical term meaning error due to reading from an angle instead of straight on.

Normal moisture content varies with the type of starch. Corn will have 10%-12%; potato will have 15%-18%; tapioca 13%-15%.

To test the cleanliness and color of starch, spread a few grams over the surface of white paper. Compare with the same quantity of a standard. Shake a few grams with cold water in a test tube and allow to settle. Bits of metal or dirt will settle to the bottom, under the starch; woody trash will float. Compare with standard. (To check, wash through bolting silk sieve with cold water).

The pH is tested in a cold 10% suspension in freshly boiled, then cooled, distilled water. Use an electrometric pH indicator. If this is not available, sufficiently accurate tests may be made with short-range pH paper, covering the range between 4.5 and 8.5.

Chloramines (Starch thinners, such as Aktivin). The only test of interest for these materials is available chlorine. On long storage or storage for shorter periods exposed to moisture, chlorine will be lost. The value of any particular chloramine is proportional to the percentage of available chlorine. This may be tested by any of the methods used for available chlorine in hypochlorites, found in any standard work on analysis. The method consists in adding potassium iodide, freeing the chlorine by acidifying, which in turn frees iodine from the iodide. The free iodine may be titrated with arsenious acid or sodium thiosulfate.

Enzymes. Test by the ASTM method for desizing yarns or cloth with the following change: The enzyme desize is carried out for exactly five minutes in a constant temperature bath or oven, not allowing the temperature to vary more than one-half degree. The samples should be warmed to bath temperature before being put into the solution. The sample weights are preferably exactly ten grams. (Exactly 20 times the sample weight of a 0.100% enzyme solution is used (200 cc). Evaluate the enzyme on the basis of the percentage of size removed. Comparison should, of course, be made on a sample of the same yarn or cloth each time.

Softeners and slashing compounds. Again a word of warning about attempting to evaluate softeners and similar materials on the basis of approximate analysis. It is no more valid than attempting to evaluate the spinning properties of cotton from its chemical analysis. Since analyses are often made, and since they are useful to check uniformity, some of the methods found by experience in the author's laboratory to be the most satisfactory are given.

(Note: The accompanying table shows the composition of some slashing compounds in actual use. The analyses were made in the writer's laboratory by chemists specializing in work on sizes. These were chosen from a selection of sizes manufactured by reputable concerns, and to the knowledge of the author, all gave at least satisfactory results, showing that great variation in materials is allowable if the proper balance of properties is maintained.)

Moisture. Determine by xylol, as given under starch. (Note: if such darkening of the compound occurs, this is generally due to some decomposition of starch or starch gums present, which will probably cause the moisture to run slightly high. Toluol would be a better solvent to use in this case instead of xylol if it can be shown that no deliquescent agents (such as glycerin, chlorides, etc.) are present. The lower boiling point of toluol gives less chance for decomposition, but also will not be high enough to remove all the water from a deliquescent agent.)

pH. pH is most conveniently tested in a 10% emulsion or solution, using freshly boiled and cooled distilled water. If an electrometric pH indicator is not available, use short range pH paper indicators, available at any chemical supply house. pH papers on hand should cover at least the range from 4 (acid) to 10 (alkaline).

Ash. A one or two gram sample is ashed in a muffle furnace or over a Meker burner in a porcelain crucible. Great care must be taken to avoid loss while any moisture is driven off and while the fat is decomposing. Where materials contain chlorides, the ash determination is not of much value, for at the heat necessary to remove the carbon produced by the decomposition of organic materials, some

Analyses of various sizing compounds, showing possible varations in compositions. All samples were taken from materials actually in use in mills. Part of the variation is due to variation in requirements, part due to use of dfferent fats or gums, some of which are more efficient than others, therefore requiring different amounts to obtain a balanced size.

Total % Fats	% Saponifiable Fats	% Un-saponifiable Fats	% Moisture	% Ash	% Starch and gums	% Chlorides	% Sulfates
85.3	66.0	19.3	13.7	1.0	0.0		0.6
31.8	8.2	23.6	51.1	7.0	12.3	6.3	
96.0	5.5	90.5	2.2	1.8	0.0		
58.4	58.4	0.0	35.4	6.2	0		4.2
47.0	27.0	20.0	49.7	1.3	2.0	1.1	
51.5	51.5	0	45.7	0.8	2.0		
47.5	28.2	19.3	40.7	1.9	9.9	0.5	0.3
55.0	50.4	4.6	43.4	1.6	0		0.7
20.5	18.0	3.5	56.2	0.3	23.0		
96.3	46.7	49.6	3.6	0.1	0		
31.8	20.2	12.0	36.2	17.0	15.0	16.6	
99.8	14.5	85.3	0.2	0	0		
26.0	9.7	16.3	55.8	7.0	11.2	6.7	
31.5	22.1	9.4	67.0	1.5	0		
24.4	24.4	0	70.5	5.1	0		
17.1	8.7	8.4	55.0	12.8	15.1	12.8	trace
25.4	7.0	18.4	53.5	6.5	14.6	6.1	

Artistry in .. Chemistry

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An improved softening and finishing agent for use on all types of fabrics. It imparts an odorless finish which is resistant to washing and dry cleaning. Can be used as a substitute for sulphonated oils, tallows and other softeners. Its use eliminates yellowing and rancidity often encountered with the usual fatty type of softening agents.

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A penetrant and cleanser designed for use on all fabrics especially those that are tightly woven and highly twisted. Recommended for pad-dyeing where it insures uniform and thorough penetration. It is of great assistance where low temperature dyeings are necessary. Non-foaming at high speeds, it is stable in neutral, alkaline and acid solutions.

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Velvamine GF is a blend of amines and softeners designed to protect acetate colors from gas or fume fading. It resists removal by drycleaning and, when used on mixed fabrics, has a minimum effect on the shade and light fastness of the direct colors. Velvamine GF produces a soft, full hand and does not affect the appearance of the treated fabrics.

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Exporting Agent: Chem-Col Company, 82 Wall St., New York City.

chlorides are volatile. Ash tests in themselves are of very little value in analysis, but should be used in conjunction with other tests to assist in interpreting other results.

Fats, Oils, and Waxes. Reflux ten grams with 100 cc of 10% sulfuric or hydrochloric acid for one hour. Extract with low-boiling petroleum ether, wash the extract with water twice, and evaporate the petroleum ether on a steam bath to practically constant weight, using a porcelain evaporating dish. A definitely constant weight will probably never be obtained, as most fats and oils are slightly volatile at this temperature. Calculate percentage fats, oils, and waxes.

To determine the approximate freezing point of the mixture, dip the bulb of a thermometer into the melted mixture. Remove thermometer, hold horizontally with the bulb slightly low, so that a drop of the melted mixture collects on the bulb. Twirl slowly. Read the temperature at which the drop freezes and turns with the thermometer. It will generally cloud up a few degrees above the freezing point. (Accurate freezing points are difficult to make and require special apparatus, but this method is satisfactory for the purpose.)

Many sulfonated products will not be sufficiently broken down by one hour's refluxing. If sulfonic acids are suspected, do the original hydrolysis with hydrochloric acid, and test a few drops of the solution for sulfates with a few drops of barium chloride. If this test is positive, reflux the acid solution after removal of the fats for a further three or four hours to determine if any more fats separate. (Do not take this as a positive test for sulfonic acids, as sulfate salts will also give a positive test.)

Saponifiable and Unsaponifiable Matter. If desired, the mixture obtained in the foregoing may be further broken down into saponifiable and unsaponifiable fractions. Reflux the fat mixture after weighing for one hour with 50 cc of 5% alcoholic potassium hydroxide. Add 40 cc of water. (If the material is more than half fats, use 70 cc of alkali solutions and 55 cc of water.) If, at this point no oil separates, there may be no unsaponifiable matter present. Extract thrice with 50 cc of low-boiling petroleum ether, washing the extracts with 50% alcohol. Evaporate the solvent on a steam bath to practically constant weight as before. Calculate percentage unsaponifiable matter.

Apparatus for testing moisture by xylol method.

Acidify the alcohol-water solution with hydrochloric acid. Extract with petroleum ether as described previously, evaporate solvent, and weigh. Calculate percentage of saponifiable matter.

Further investigation of the fats, oils, and waxes is extremely difficult technically. The Hanus value, acetyl value, Hubl number, Valenta test, Maumene test, Elaidin test, saponification number, specific gravity, and refractive index are some of the tests which could be made. Even with all these tests, however, exact identification of the components of a complex mixture is practically impossible.

Inorganic Materials. Two samples should be hydrolyzed as given for fats, one with sulfuric and one with hydrochloric acid. The former may be tested for chlorides, the latter for sulfates, phosphates, and any other negative ions whose presence is suspected. For the usual tests, it is best to dilute the hydrochloric acid solution to 250 cc in a volumetric flask, and take portions for testing for both positive and negative ions. Aliquot portions may be taken for quantitative analysis.

The usual analytical methods are used on this solution, taking into account possible interference from the starches, gums, and their hydrolytic products which may be present. Also, it should be made certain that any sulfonic acids which were present have been completely decomposed.

Starches, Dextrins, and Gums. The chemist who has not had much experience with these materials is well advised to leave them out of his system of analysis, and to assume that the difference between what he finds of fats, moisture, inorganic materials (ash), and 100% is "starches, starch gums or natural gums." This, of course, will not be highly accurate. Where it is certain that natural gums are not present, the method given as follows will give fair results for the total of starch, dextrin, and starch gums. Sugar, if present, will also be included, as the method is based on conversion of starch to sugar. If starch or dextrin is present, the original compound will give a blue or purple color with iodine solution.

Boil 10 grams of the sample with two grams of paraffin wax and 200 cc of 1% HCL under reflux for three hours. Allow to cool, when the cake of fats will be easily removed. Wash the solution into a 250 cc volumetric flask, neutralize using litmus paper indicator, and make up to volume. Pipet exactly 10 cc of standardized Fehling solution "A" and 10 cc of Fehling solution "B" into a round bottom flask.

From a buret add a quantity of solution to be analyzed not quite sufficient to use all of copper and boil for two minutes. (This is most conveniently calculated by esti-

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mating starch by difference.) Add one drop of methylene blue, and then a small additional amount of the solution, boiling again for a half minute.

Continue adding solution and boiling until the color change is obtained. This will give the number of cc of unknown which contains an amount of starch equivalent to 10 cc of Fehling solution, from which the amount of starch in the original sample can be calculated.

The Fehling solution is made up in the usual way for determination of reducing sugars, and standardized against dextrose. Its starch equivalent will be equal to its dextrose equivalent multiplied by 0.9. The accuracy of this method is dependent on a number of variables, including the total volume of the reacting solutions. Standardization should therefore be made against a 0.1% dextrose solution, so that the concentrations will be approximately those encountered in the usual analyses.

Penetrants. Before testing penetrants, it must be decided just what properties are desired from the penetrant. In sizing, a penetrant may be desired for its original wetting action, or for its rewetting ability. Wetting ability may be tested by the Draves test for wetting time given in the 1945 Yearbook of the American Association of Textile Chemists and Colorists. However, some penetrants are more effective in cold water and others more so in hot water. Since hot water will itself wet cotton very rapidly, the evaluation of a penetrant for use in hot solutions becomes a more complicated technical problem than we wish to cover here. Also the presence of other sizing ingredients will affect the action of the penetrant.

For a rewetting test, some of the treated material is dropped on the surface of plain distilled water, and the time required for it to sink is measured. Only normally sized yarns should be so tested, as the presence of the sizing materials will affect the rewetting action as well as the wetting action.

The same complications enter in testing for foam. Some penetrants may cause excessive foam, but this can be tested properly only in the size box.

Penetrants for other uses must undergo a wide variety of tests: Anti-rusting properties, foaming or anti-foaming as desired, mildew resistance for some purposes, compatibility with hard waters, and other materials encountered in textile processing, etc. For filling conditioning, they must also not attack the varnish on bobbins, nor have an excessive swelling effect on the wood.

Sulfonated Products. Complete methods of analysis for these materials are given in "Sulfated Oils" by Burton and Robertshaw, Chemical Publishing Co., 1940.

Water Analysis. Complete methods for water analysis are found in most standard texts on chemical analysis.

Continued Next Issue

Rayon Shipments Continue to Increase

Shipments of rayon yarn and staple for the first five months of the year aggregated 381,800,000 pounds, an increase of 8% over the January to May period of 1946, according to Textile Economics Bureau, Inc.

With the United States leading the way, world rayon capacity this year will grow to 2,700,000,000 pounds and if raw materials were available, output could come close to the peak production of all time which was 2,825,395,000 pounds in 1941. The estimate for total world capacity is based on projected increases announced by several countries and includes also the potentially large operable capacity available in Germany, Italy and Japan. Major repairs, if effected in Germany and Japan, would increase the total operable capacity of rayon yarn and staple by an additional 250,000,000 pounds.

The capacity figure is significant because it indicates the potential output which will be available when the world economic situation gets back to somewhat normal figures, according to the Bureau. It is also noted that the actual 1946 world production of rayon represented only 62% of the potential.

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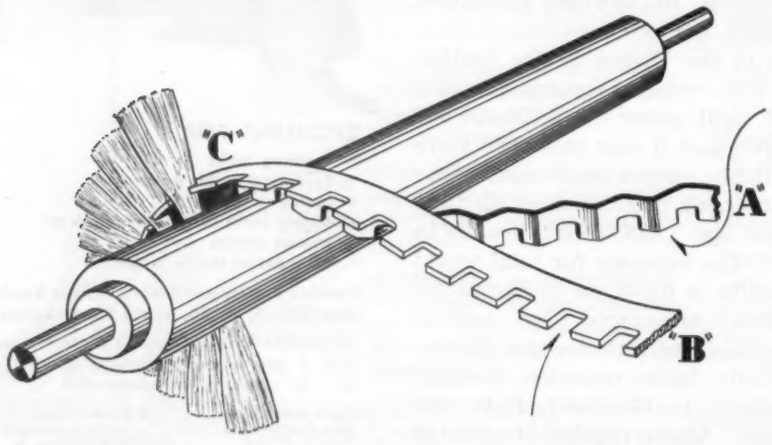

"A"—a metal strip, notched to hold tufts of bristle, wound around the metal core, resting on - - -
"B"—a similar metal strip, wound edgewise on the metal core at point - - -
"C"—where tufts of bristle are inserted and sealed in place with special plastic cement, which covers metal strips "A" and "B" completely, surrounds and penetrates the base of the tufts, and makes METLKOR brushes permanently moisture proof, easy to clean, ideal for applying color, raising and laying, etc.
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Manufacturers of Industrial Brushes Since 1877.

CEDAR GROVE, ESSEX COUNTY, NEW JERSEY

STA Annual Convention at Blowing Rock

(*Continued from page* 86)

At the final business session on Saturday morning, Governor J. Strom Thurmond of South Carolina reviewed the gains and losses of the industry from the time the first southern cotton mill was built until the present, in an address entitled "Textiles and the South."

"The glories of the past and present are but stepping stones for the future. The South must not be content with holding her own. To remain static is to stagnate. Just as the development of the textile industry in the past has been a pattern for the development and success for other industries, so can it be the pattern of development in the future," said the Governor.

Wool Manufacture Urged

Southern textile men were urged to "go into the wool business" by Thurmond Chatham, chairman of the board of directors of Chatham Mfg. Co. of Elkin, N. C. According to Mr. Chatham, it is possible to double, treble, and even quadruple the textile business in the South by getting into the woolen business. "Go back home, study the wool industry, and talk to your associates about going into wool. I believe that it is safe to say that within 50 years all of the woolen mills will be down here in the South."

Mr. Chatham stated that the South has the people, climate, water, and everything else needed to produce woolen textiles. This does not include raw material, he pointed out, but neither does New England grow its own wool.

Prospective operators of new woolen mills can obtain all necessary information with regard to processing and sources of raw material from leading woolen mills in the South. These include Chatham Mfg. Co., Elkin, N. C.; Peerless Woolen Mills, Rossville, Georgia; and Fieldcrest Mills, Spray, N. C., according to the speaker.

"We have the textile business of the world if we want it," said Mr. Chatham.

AN EXCELLENT DYE LEVELLING AGENT

A SUPERIOR PENETRANT IN PACKAGE DYEING

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POWERFUL SURFACE TENSION DEPRESSANT

RENDERS THE FABRIC HIGHLY ABSORBENT

AN OUTSTANDING WETTING AGENT

Hartex Duofol L, a sulfated condensation product, is a clear amber oil possessing superior wetting, rewetting, and softening properties. It is clearly miscible with water in all proportions and retains its high surface activity in the presence of hard water, salt, alkali, or weak acids.

Duofol L was developed for instantaneous wetting in baths at all temperatures up to the boil.

It is recommended for dyeing operations in general and specifically for vat and package dyeing to give greater uniformity of shade.

When a solution of Duofol L is dried into a fabric, it renders the fabric highly absorbent (rewetting property). In addition, Duofol L acts as a softening agent making its use doubly advisable in sanforizing operations.

Quantities as low as 4 oz. per 100 gallons have proved satisfactory for most applications.

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How OTHER MEN Manage

Textile Mill Lubrication Being Studied

SIMPLIFICATION of lubrication procedures was asked for by Contributor No. 7841 in the January 1947 issue. It was his opinion that a better job of lubrication can be done if fewer types of lubricants are recommended. In this letter, the author of which is an experienced engineer and a member of a committee that is making a study of the subject, suggestions are made for the improvement of lubrication procedures. Action on the part of the machinery manufacturers, the bearing industry, lubricant suppliers, and textile mills, is suggested.

EDITOR TEXTILE INDUSTRIES:

The conditions cited by CONTRIBUTOR No. 7841 are more or less prevalent in many textile mills today. The textile industry including mills, machinery manufacturers and lubricant suppliers have not been as progressive in standardizing methods as other leading industries. It is, however, gratifying to report that something is being done about it. There is a very active committee represented by prominent textile machinery manufacturers, the bearing industry, lubrication companies and fire prevention engineers now working on the subject.

The common aim of this committee is to conceive a practical plan of lubricant requirements to enable a mill to simplify the purchase of lubricants and also provide the best methods for storage and application. As usual there are individual problems confronting the program, but for the sake of discussion let it be assumed that the complications are equally shared.

Side-stepping controversial duties of each party, may the following proposed responsibilities be suggested:

Textile mills should provide suitable neat storage facilities, proper dispensing equipment and modern lubricant applicators. Further, the mills should have well trained oilers under the direct supervision of *one* well qualified person, responsible for lubrication of the entire plant. Purchasing agents should have no part in selecting lubricants. This responsibility should be placed entirely in the hands of the mechanical or lubrication supervisor. Dividing the purchase of products among several suppliers does not encourage or support their interest. Therefore, it invariably proves best to confine buying of lubricants to one, or as few sources as possible.

The machinery manufacturers should furnish explicit instructions for lubrication methods and types (not brands) of lubricants, best suited for each class of bearings. They should make sure instructions are fully understood and the importance appreciated. Lubrication charts suitably posted are better than handbooks or manuals which usually become lost or the property of one individual.

Only first quality lubricants should be purchased from recognized reputable manufacturers having trained lubrication engineers to check performance, correct faulty mill methods and suggest changes wherever individual mill conditions require modification from machinery manufacturers' general instructions.

Lubrication surveys by competent service engineers are one of the best suggestions. They should be encouraged and made periodically.

The illustration of one survey resulting in 24 different kinds of lubricants only indicates that the particular individual was not a qualified lubrication engineer in any sense of the word. Unless conditions are unusual, there is no reason why the average mill should not be properly lubricated with seven or eight different type lubricants.

It is only logical that leading oil companies with their facilities for research, testing, manufacturing and training in all fields of lubrication are best equipped to suggest proper methods and products. If a mill is dissatisfied with one, switch 100 per cent to another.

Maintenance and replacement costs in many mills are way out of line but I think we will see a

---

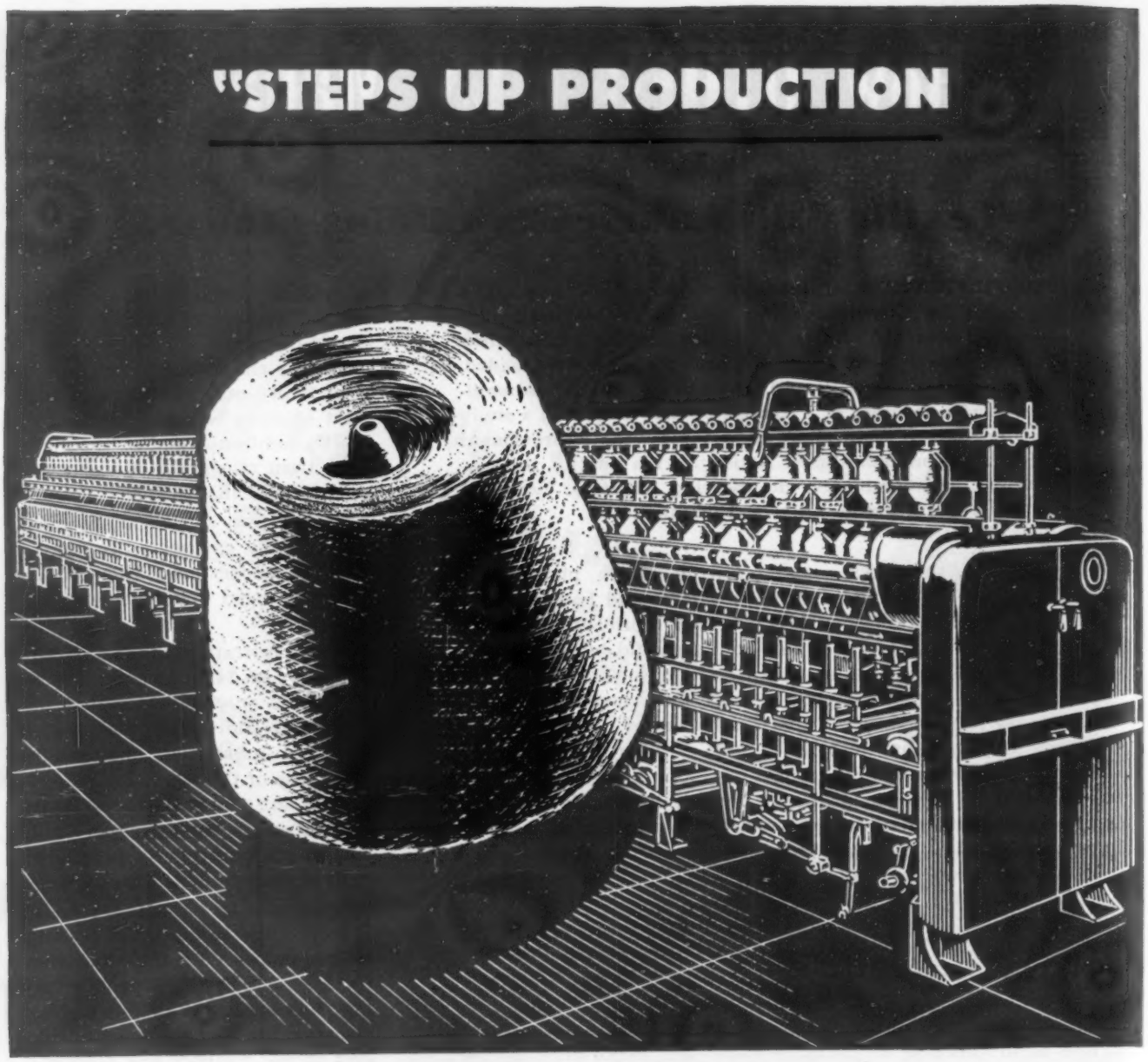
THROUGH the exchange of ideas in this department, readers can be of valuable assistance to other mill men. You are invited to make use of this section of "Textile Industries" for the discussion of problems arising in the textile manufacturing or finishing plants, or for the presentation of new ideas of interest to other readers.

Questions, answers, or letters need not conform to any particular style.

Names or connections of contributors are never used without permission, each participant being designated by a number.

Correspondence should be addressed to: Editor "Textile Industries," 1020 Grant Building, Atlanta 3, Georgia.

"STEPS UP PRODUCTION



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LUBRICATION—"ENGINEERED TO FIT THE JOB"

big change for the better in the near future. High production and more expensive machinery will demand the highest order of maintenance and lubrication to meet competition and quality.

The more talk about the subject the better, and I hope the letter attracts well-deserved support.

It may interest you to know that a recent survey by Associated Factory Mutual Fire Insurance Companies' engineers, in over 200 textile mills, disclosed that 40 per cent of the mills had never had a lubrication survey. Those mills averaged 15 per cent more fires yearly than the mills who had availed themselves of this service.

R. G. SHEPHERD
Engineer
Associated Factory Mutual Fire Insurance Companies
Boston, Mass.

Experimentation on Cards

Subject Briefed: *Experimentation on cards in an effort to get better cleaning, higher breaking strength, and a more even card sliver. Speed of licker-in was increased from 350 to 450 rpm with the result that breaking strength was lowered with no apparent improvement in cleaning or uniformity.* (CONTRIBUTOR No. 7851, *May* 1947.)

EDITOR TEXTILE INDUSTRIES:

CONTRIBUTOR No. 7851 should bring his licker-in speeds up to 450-460 rpm, and judging from the stock of Strict Good Ordinary and card strips with which he has to work, he could apply the continuous stripper and this would give him an evener card sliver and in turn a higher breaking strength.

He did not say how much further he had gone in his experimentation. Most coarse yarn people like a heavy sliver from the card. If he will decrease the size of the card sliver to around 50 grains, he will get better drafting at the following processes and he will prevent a lot of lumps going through the machines.

CONTRIBUTOR No. 7937

Sliver Evenness Tests Cited

Subject Briefed: *Study of variation in evenness in sliver and roving. (September 1946*—CONTRIBUTOR No. 7792.)

EDITOR TEXTILE INDUSTRIES:

I am glad that CONTRIBUTOR No. 7792 stuck his neck out to discuss unevenness of sliver and roving, for there is plenty of room for thought on this subject. It is discouraging, in a way, for the man in the mill when he learns that each machine through which he puts his stock will tend to "mess it up" worse than before.

But even though the machines are wrong, the more you use a sliver tester, the more you realize how much can be done in the mill to improve evenness. Recently we made some sliver tests which might be of interest.

We had just installed some new drawing frames, and while the sliver from different frames varied considerably, one frame in particular seemed better than the others. We decided to make some tests on this frame to see, in a general way, what effect this frame had on sliver from different cards.

First, we selected an exceptionally good card which we will call "Card A," and ran some of its sliver on the tester, finding that its unevenness in thickness averaged 10.50%, the highest unevenness in any one yard being 12.50%. In our mill, we are carding 12½ pounds per card per hour. This is about as good as we have been able to do on our cards and if anyone, carding as heavy as this, has been able to do better, we would like to know about it. One time we thought we were very smart when we got some charts showing only 6% variation, but found that we had too much pressure on the pan cone of the tester, and when this pressure was relieved, the variation jumped back above 10%.

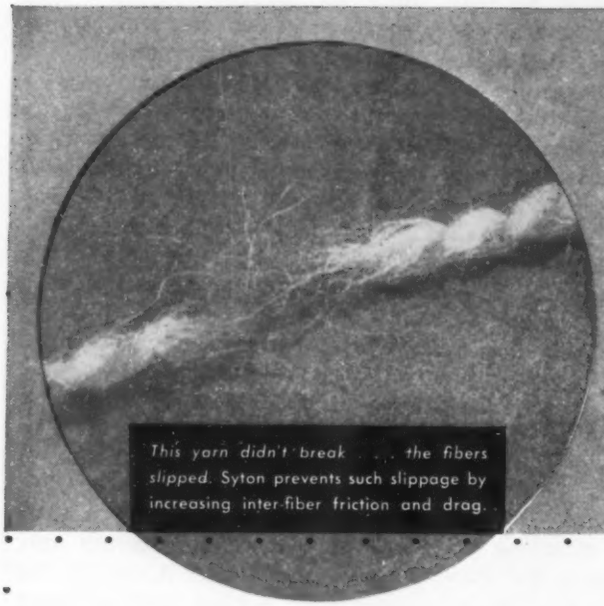
We placed 36 cans of sliver from "Card A" behind the good drawing frame and ran a chart on each of the six deliveries of drawing. We found that the variation of thickness on these six charts averaged 17.68%, with the worst single yard having a variation of 23.05%. It will be remembered that the card sliver in this test averaged only 10.50% variation with its worst yard having only 12.50% variation. Although the six slivers behind each drawing delivery must have averaged each other to some extent, it must be concluded that the drawing frame damaged the stock when the average unevenness jumped to 17.68% with the worst yard showing 23.05%. It will also be remembered that this drawing frame was exceptionally good.

We next selected a card which had a bad doffer and ran a sliver test. Sliver from this card, designated "Card B," showed an average variation of 27.32% with the worst yard of 47.60%. We put 36 cans of this sliver behind the same drawing frame referred to herein, under the same operating conditions and ran sliver tests.

The six charts showed an average variation of 20.63%, with the highest yard being 29.40%.

This test was a crude one and not sufficiently exhaustive to prove much of great value, but we do believe that two conclusions are indicated, namely:

(1) In test B, the average unevenness in the card sliver was reduced from 27.32% to 20.63% and the maximum unevenness of one yard from 47.60% to 29.40%. This seems to prove that the doubling of slivers, within itself, will average up and reduce the percentage of unevenness. If this is true, then the test on the "Card A" sliver showed that the drawing frame damaged the sliver approximately 7.18%, or the difference between the average of the card sliver percentage of 10.50



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5. Produces more uniform yarn.
6. Cuts spinning time and cost.

If you or your technicians want to read the full report on this new Monsanto textile chemical, write: MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, 140 Federal Street, Boston 10, Massachusetts.

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CHEMICALS — PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

and that of the drawing sliver of 17.68.

(2) These tests show that the more uneven the card sliver, the more uneven will be the drawing sliver. In the mill therefore, the more we fight for evenness of thickness in each process, the more even will be the yarn.

We are offering this as a contribution to the thought and discussion of this subject which we agree is of vital importance.

CONTRIBUTOR No. 7849

Cork Cots on Combers

EDITOR TEXTILE INDUSTRIES:

In my opinion, leather covered top detaching rolls and draw box rolls on combers are not practical because of the fact that a skilled workman is needed to replace covering on these rolls. It is not always easy to find a man who can perform this job satisfactorily.

Sometimes the sliver is uneven due to poorly covered rolls. Especially is this the case if the top detaching rolls are not properly covered since here a uniform pressure is required.

I have an idea that the use of cork-synthetic or cork cots on those rolls might be satisfactory; however, I do not know of a mill using this type of cot. I have tried synthetic rubber cots but find that trouble is experienced with static electricity.

I would appreciate any information that your readers might have on this subject.

CONTRIBUTOR No. 7936
(South America)

(*This letter was submitted to* CONTRIBUTOR No. 7938 *prior to publication. His answer follows. Opinions and experiences of other readers are invited.*)

EDITOR TEXTILE INDUSTRIES:

I agree that comber detaching top rolls not skillfully turned down are a menace. That goes for any material used, whether it be leather, cork or synthetic covering. The reason that we still stick to leather is that leather for back top detaching rolls is still most reliable.

We long to see a synthetic back detaching roll covering put on the market. We do have plastic front top detaching rolls but the front rolls need not be microscopically true, so we get away with using them.

At this very time we are testing a set of cork-synthetic back detaching rolls on a comber. Two of the six perform badly—being apparently "hollow;" and therefore leave a hole in the web, permitting good staple to pass into the waste can.

Research may develop a roller covering some day that is superior to any other. But, as I see it, some more patience is required for the present. Then again by extra attention and great care we may be able to run one or two machines quite well; but, what will happen when you have a whole room changed over.

Leather still seems to have the edge on weather conditions and, if not actually damaged or abused, will last a suitable time giving good performance.

Draw box rolls, too, still look best in leather. We are of course still trying any new rollers that come our way hoping to find the perfect roll with regard to quality of sliver turned out and length of life.

CONTRIBUTOR No. 7938

Method for Storing Section Beams

EDITOR TEXTILE INDUSTRIES:

It is to be noted that many mills have some difficulty in finding proper storage for section beams that are ready to be run on the slasher. It is necessary to keep a supply of these full section beams on hand to avoid slowing down the slashers.

Quite a number of mills store these section beams on the floor, flush with heads and without covering in order to utilize space, but the outer layer of yarn often becomes dirty due to various causes. A number of mills have also covered the section beams with a layer of paper in order to protect the yarn while it is stored for further processing on the slasher.

We have tried all of the usual storage methods for section beams and finally devised something out of the ordinary for this problem in the mills. We have a large battery of slashers and find it neces-

sary to keep plenty of section beams on hand.

Our improved method consists of V-shaped upright supports with brackets attached which will support a heavy section beam. It is possible to store as many as four section beams one above the other on each side of a beam support, depending on the height of the ceiling from the floor. A regular type hoist on an overhead track may be used to lift the section beams. This method saves space and keeps section beams clean at the same time.

CONTRIBUTOR No. 7843

Neps in Comber Sliver

Question briefed: *What is the cause of the large number of neps in our combed stock? The sliver delivered at the comber weighs 31 grains per yard and the lap fed into the comber weighs 750 grains per yard.* (CONTRIBUTOR No. 7853, *January*, 1947).

EDITOR TEXTILE INDUSTRIES:

There are several causes of this. One cause is carding too heavy and too fast. If cards are set too closely they will soon become dull and this condition will cause neps in the cotton. The card screens could also cause this trouble if they are not set close enough.

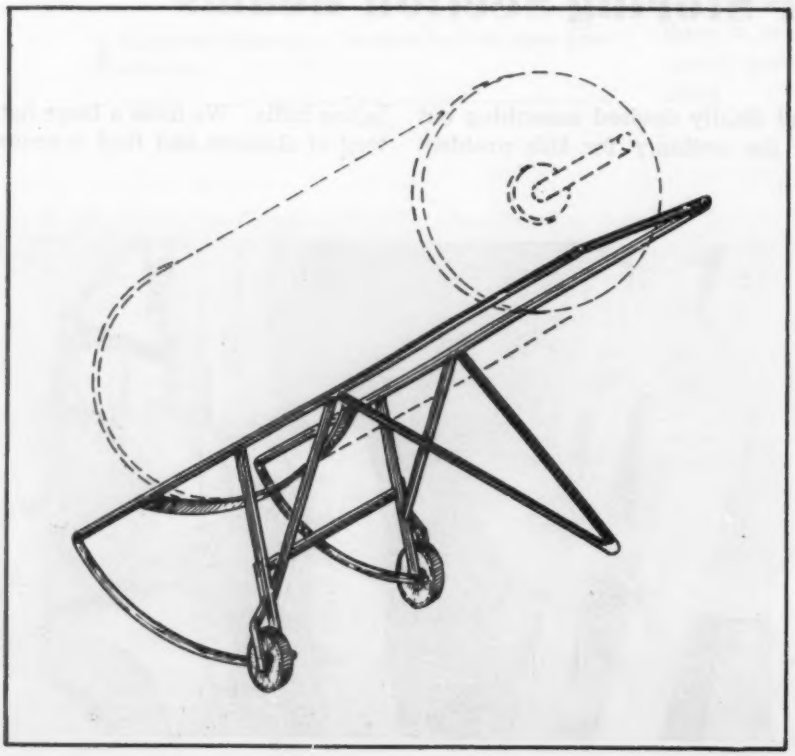
We manufacture high-grade combed yarns ranging from 10s to 70s, single and ply, and I find that checking on the above usually eliminates neps in the stock at combers.

CONTRIBUTOR No. 7884.

Improvised Loom Beam Truck

EDITOR TEXTILE INDUSTRIES:

For the benefit of overseers or superintendents in those mills which do not have material handling equipment to move loom beams from the slashers to storage or the warp tying machines, we would like to offer the following expedient for consideration.



We have devised a cradle type truck for transporting these beams which requires no lifting on the part of the employee, eliminating the possibility of serious back injuries which are expensive to both operatives and the company.

By referring to the accompanying sketch it will be seen that the bed for the warp is made of pipe with metal bands connecting underneath to support the warp. Welded to the bed of the truck is the necessary supporting framework. Attention is invited to the curved supports at the front of the truck which facilitate raising and lowering of a beam. These curved pieces of rod or pipe are made from straight stock, about 36 inches long. The supporting members for the wheels are braced by straight stock at an angle of 45 degrees. The wheels are small in order to utilize the curved cradle supports.

CONTRIBUTOR No. 7865

Stripping Cards

EDITOR TEXTILE INDUSTRIES:

I read with much interest the article "Mill Problems Discussed at Durham Meeting STA" which appeared in the December 1946 issue, particularly that portion devoted to the discussion of methods of stripping cards.

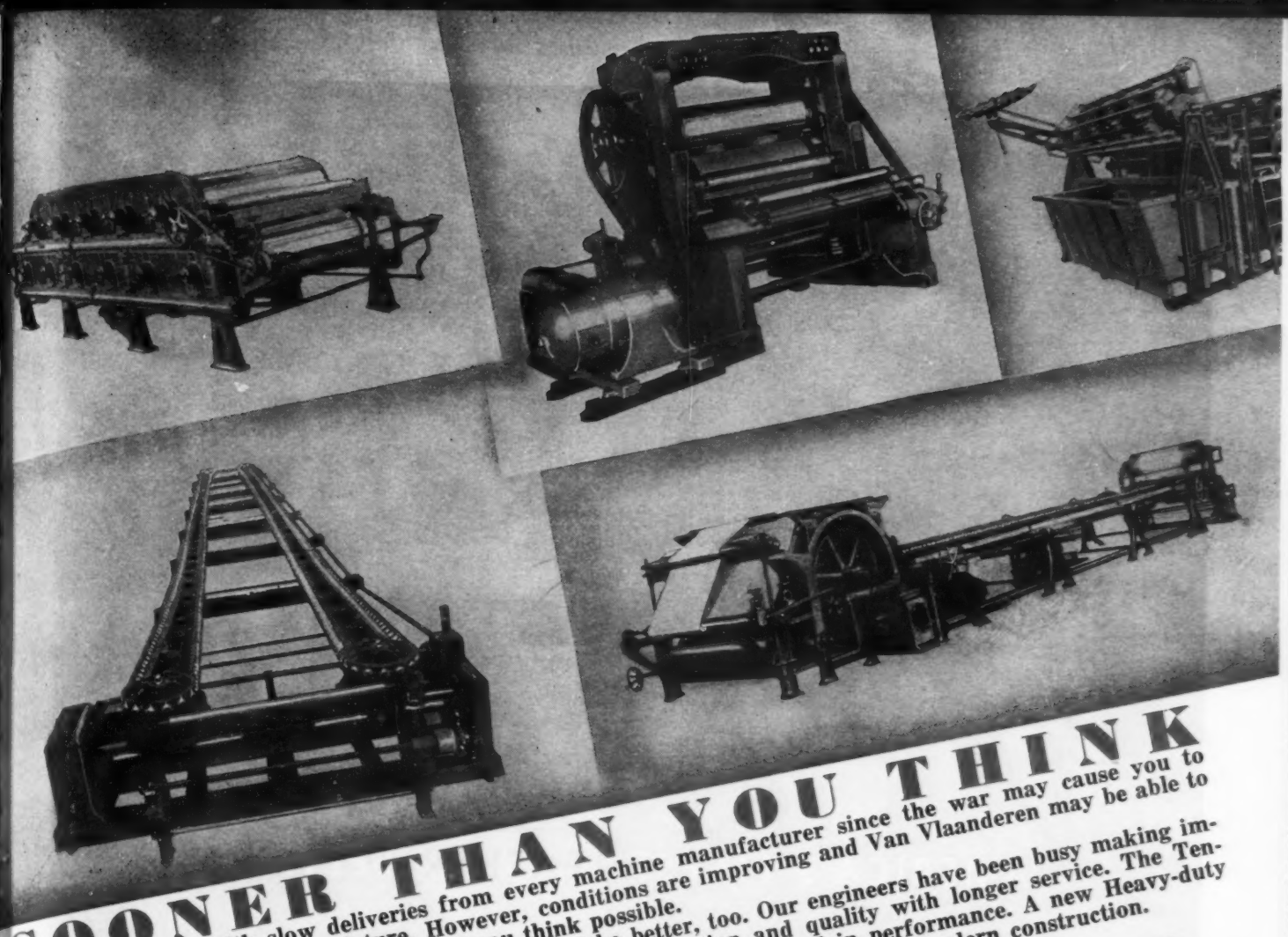
We formerly used the hand stripping system on 36 cards and had two card tenders for these machines. When this hand stripper was placed against the cylinder or doffer of a card, the air was filled with dust and short fibers.

We now use a vacuum system of stripping cards. The air and area around the cards are much cleaner. Also, we now use one card tender for the 36 cards instead of two.

An increase of 5% has been made in production. The quality of the sliver has been improved considerably.

This vacuum system is also used to take out fly and motes on cards and pickers as well as comber noil on the combers.

CONTRIBUTOR No. 7897



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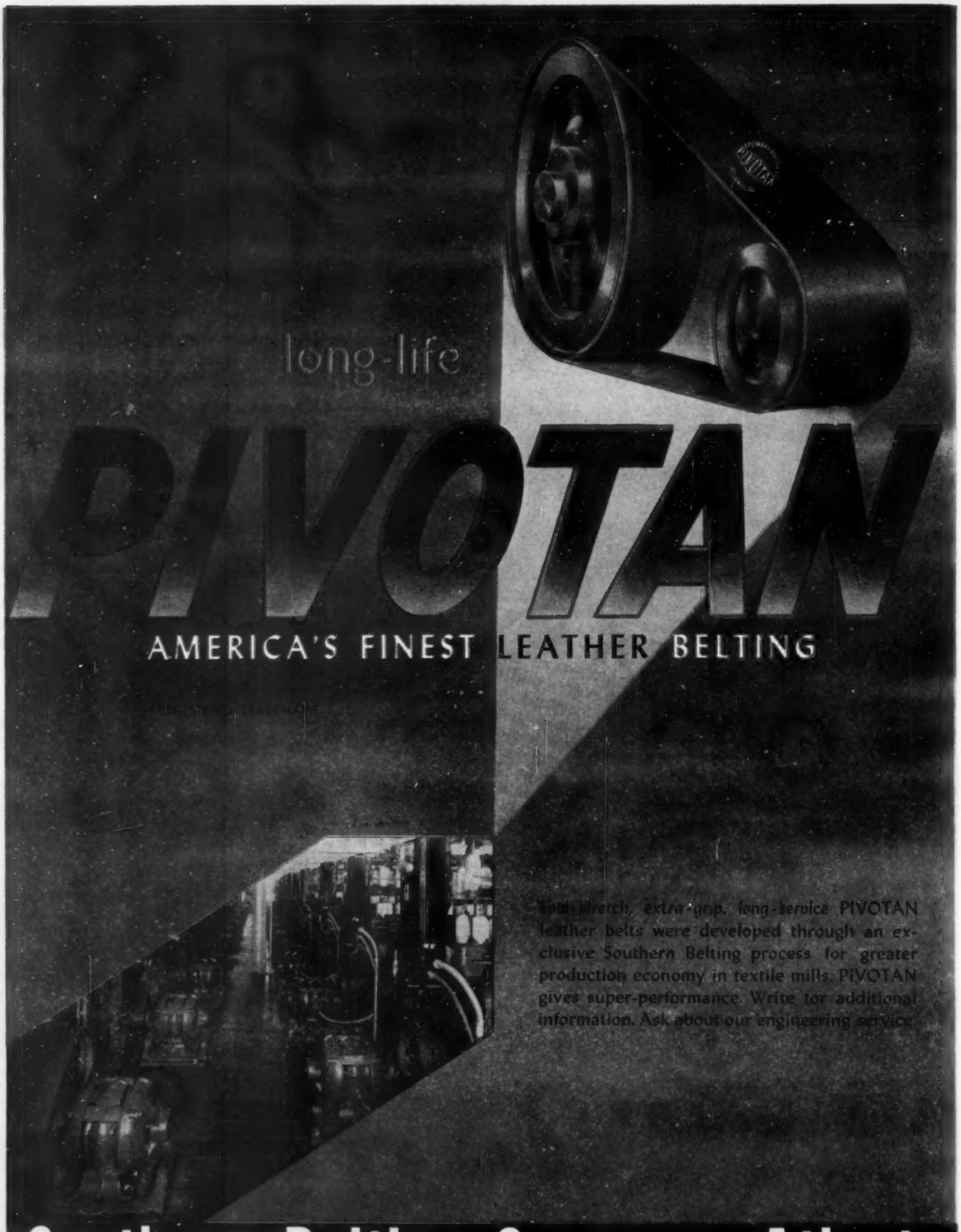
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Low-stretch, extra-grip, long-service PIVOTAN leather belts were developed through an exclusive Southern Belting process for greater production economy in textile mills. PIVOTAN gives super-performance. Write for additional information. Ask about our engineering service.
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Total Draft vs Mechanical Draft at Cards

Question briefed: *A cotton lap weighing 12 oz. per yd. is fed into a card producing a sliver weighing 50 grains per yd. Waste extracted is 6.18%. (1) What is the total draft? (2) What is the mechanical draft? (3) In what ratio (per cent) is the 6.18% extraction to (a) total draft? (b) mechanical draft?* (CONTRIBUTOR No. 7904, *March* 1947)

EDITOR TEXTILE INDUSTRIES:

The formula for determining total draft is:

$$T = \frac{\text{Weight per unit length fed in}}{\text{Weight per unit length delivered}}$$

In this case, by expressing the 12 oz. in grains (same as delivery), we have

$$T = \frac{12\times7000}{16\times50} = 105$$

The definition of mechanical draft is as follows:

$$\text{Mech. Dr.} = \frac{\text{Delivered length per unit time}}{\text{Feeding length per unit time}}$$

The mechanical draft is established through calculation of the gear train and is usually indicated (after cancellations) as a so called draft constant.

The following gear train of our American H & B card may serve as an example:

$$\text{Mech. Draft} = \frac{48\times120\times34\times180\times24\times22\times20\times2''}{17\times\text{Dr. G.}\times24\times19\times16\times22\times20\times6''} = \frac{2273}{\text{Dr. Gear}}$$

If the card did not remove waste we could now say that we would have to put in a

$$\frac{2273}{105} = 21.7 \text{ or } 22 \text{ draft gear}$$

but, since this card is removing 6.18% waste, it becomes obvious that the 21.7 tooth draft gear would furnish too much draft and consequently a lighter sliver to come out of the delivery end.

In order now to pre-calculate the mechanical draft it is necessary to look over the formula for total draft and see what steps to take to readjust it to fit into the picture or, we might as well say to change it into the necessary mechanical draft which, when divided into the mechanical draft constant, will furnish the size draft gear wanted. We repeat:

$$\text{Total Draft} = \frac{\text{Weight per yard fed}}{\text{Weight per yard delivered}} = \frac{\frac{12\times7000 \text{ grs. per yard fed}}{16}}{50 \text{ grs. per yard delivered}} = \frac{5250}{50} = 105$$

Due to the fact now that each time a yard of lap weighing 5250 grains is fed in and in the course of work within the card the equivalent of 6.18% is lost to sliver production, we may as well deduct 6.18% waste to start with and calculate the necessary mechanical draft as follows:

$$\text{Mech. Dr.} = \left(5250 - \frac{6.18\times5250}{100}\right) \div 50$$

$$= 5250\left(1 - \frac{6.18}{100}\right) \div 50$$

$$= 105\left(1 - \frac{6.18}{100}\right)$$

$$= 98.51$$

The actual mechanical draft is therefore 98.51, and with this inserted into our draft constant formula we have:

$$\text{Draft Pinion} = \frac{2273}{98.51} = 23 \text{ Draft Gear}$$

Recapitulation to meet the question is:

(1) Total draft is the quotient weight fed per unit length and weight delivered for same unit length.

(2) Mechanical draft is "Re-adjusted Total Draft"—that is, the quotient of weight fed in per unit length minus weight of waste (in per cent) ÷ by weight delivered per unit length. This quotient, when divided into gear train draft constant will give draft gear.

(3) Correspondent's question can not well be answered separately here, since the relationship of percentage waste as against mechanical draft and total draft includes both values in both cases. We may put it this way:

$$\text{Total Draft} = \frac{\text{Mechanical Draft}}{\left(1 - \frac{\text{Per cent Waste}}{100}\right)}$$

$$\text{Mechanical Draft} = \text{Total Draft} \times \left(1 - \frac{\text{Per cent Waste}}{100}\right)$$

The following

$$\left(1 - \frac{\%\text{Waste}}{100}\right)$$

is the waste factor. We like to advise correspondent to think in terms of "Waste Factors" rather than trying to find relationship indicated in question 3.

CONTRIBUTOR No. 7913.

Cotton Between Cylinder-Frame

Question briefed: *What can be done to prevent cotton from getting between the cylinder and* frame of the card? (CONTRIBUTOR No. 7791, *September,* 1946).

EDITOR TEXTILE INDUSTRIES:

This is rather a difficult question to answer by correspondence; however, I would suggest that the following be checked:

(1) See that the picker laps have good selvages and no ragged ends.

(2) Check the selvage guides or lap plates to insure that the lap does not spread out beyond the card cylinder wires.

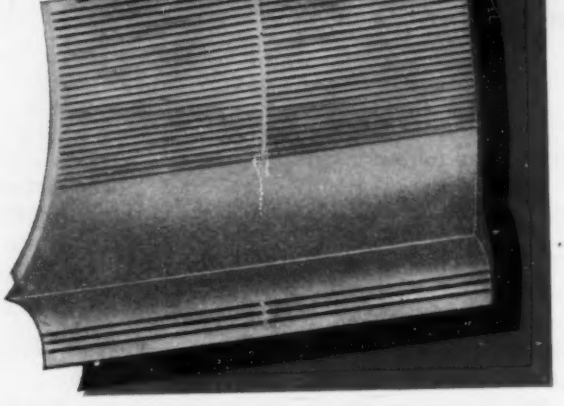
(3) Examine the card cylinder sides to see whether they can be moved closer to the cylinder.

(4) Make sure that grids are properly set up and thoroughly clean. Also see that the card fillet is not loose at the tack ends or wires deranged.

(5) Check the flats to see that they gauge the same at the ends as across the whole width of the cylinder.

CONTRIBUTOR No. 7868.

caught without a SPARE!



Today is none too soon to take stock of your card, picker, condenser, and waste machine screens.

Screens that are bent, cut, or frazzled will not produce a high class sliver, to say nothing of the excess waste they cause.

To meet the increasing demand for "quality" yarns, it pays to keep extra screens on hand so damaged ones can be replaced immediately.

Place your order with Jenkins NOW. We manufacture and rebuild all makes and models of Card, Licker-in, Picker, Condenser, and Waste Machine Screens. Whether new or rebuilt all workmanship and materials carry our iron-clad guarantee of satisfaction.

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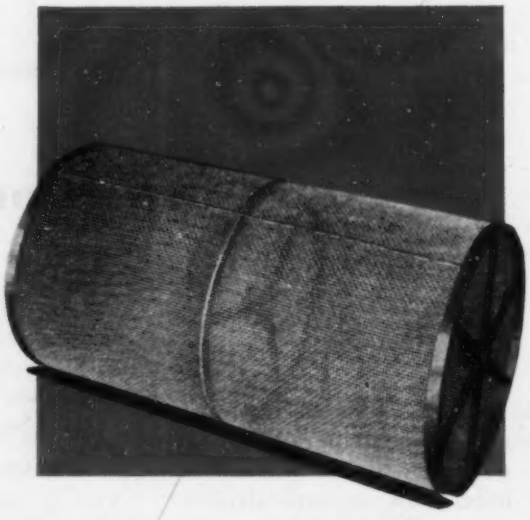

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Changes of Textile Ownership

(1940 - 1946)

The Cotton-Textile Institute in a brief filed by Dr. C. T. Murchison, president, with the Senate Judiciary Committee early in June showed that in the years 1940-1946 inclusive, 164 cotton textile companies engaged in spinning or weaving, or both, changed ownership. The brief was filed in answer to the recent report of the Federal Trade Commission in regard to textile mergers, which, Dr. Murchison asserted, gives a distorted picture of the effect of such mergers in the cotton textile industry.

The accompanying tables show changes of ownership by various classifications. Figures on vertical integration indicate a trend, but, according to Dr. Murchison, the FTC report has been grossly overstated.

Summarizing his brief, and speaking against further legislation limiting mergers by industry, Dr. Murchison said:

1. The report of the Federal Trade Commission on the Present Trend of Corporate Mergers and Acquisitions gives a distorted picture of the effect of such mergers in the cotton textile industry.

2. Despite the long history of the industry, the increasing scale of manufacture, and its participation in earlier merger movements, there is no trend to economic concentration in the industry.

3. Enactment of S. 104 would have serious effects upon small units in this industry, and small units are one of the outstanding characteristics of this industry.

4. The Federal Trade Commission has neither the knowledge nor the talent to administer this bill.

ACQUISITION OF SALES YARN AND CLOTH MILLS
(1940-1946)

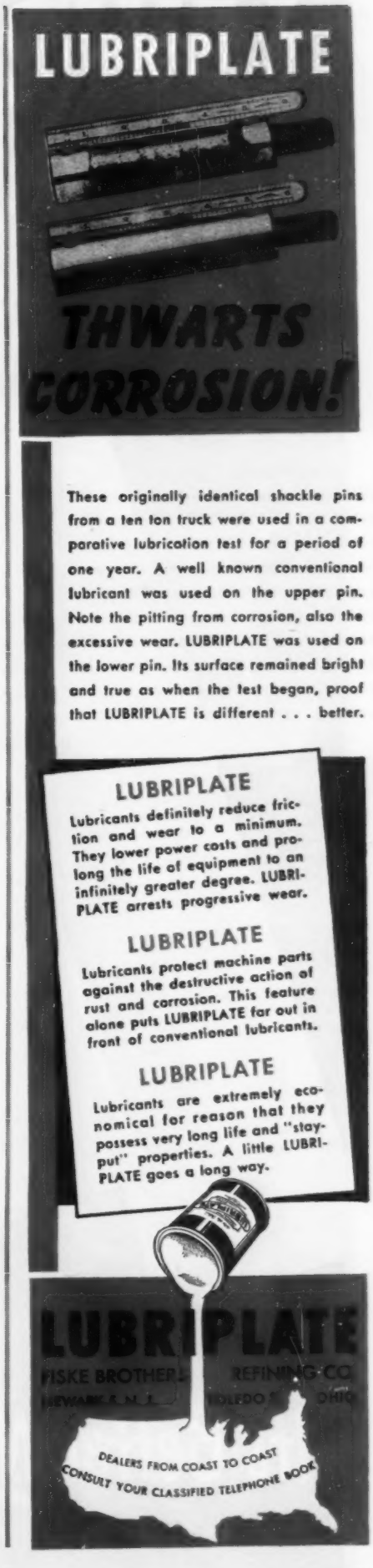
Type of Acquisition	No. of Spindles	% of Total Spindle Acquisitions
New Ownership	1,050,088	23.68%
Machinery Dealers (for resale)	375,756	8.48
Horizontal—Cotton Mills	775,088	17.93
Vertical—Cotton Mills	311,576	7.03
Vertical—Converters	665,616	15.01
Vertical—End-use, other than clothing	230,588	5.20
Vertical—Cutters	277,096	6.25
Vertical—Selling Agents	679,577	15.33
Vertical—Wholesalers	48,160	1.09
Total	4,433,545	100.0 %

ACQUISITION OF YARN MILLS, 1940-1946

Type of Purchaser	No. of Spindles Acquired	% of Total Spindles Acquired
New ownership (no combination)	253,356	37.9%
Machinery dealers	4,884	.7
Horizontal Combination	175,900	26.3
Vertical Integration:		
1. By selling agents	10,240	1.5
2. By converters	21,804	3.3
3. By cloth mills	113,004	16.9
4. By end-use manufacturers	90,072	13.4
Total	669,260	100.0%

ACQUISITION OF CLOTH MILLS, 1940-1946

Type of Purchaser	No. of Spindles	% of Total Acquisition
New ownership (no combination)	796,732	21.2%
Machinery dealers for resale	370,872	9.9
Horizontal combination	619,188	16.4
Vertical integration:		
By cotton mills	198,572	5.3
By selling agents	669,337	17.7
By converters	643,812	17.1
By cutters	277,096	7.4
By wholesalers	48,160	1.3
By end-use manufacturers (other than clothing)	140,514	3.7
Total	3,764,285	100.0%


LUBRIPLATE
THWARTS CORROSION!
These originally identical shackle pins from a ten ton truck were used in a comparative lubrication test for a period of one year. A well known conventional lubricant was used on the upper pin. Note the pitting from corrosion, also the excessive wear. LUBRIPLATE was used on the lower pin. Its surface remained bright and true as when the test began, proof that LUBRIPLATE is different . . . better.
LUBRIPLATE
Lubricants definitely reduce friction and wear to a minimum. They lower power costs and prolong the life of equipment to an infinitely greater degree. LUBRIPLATE arrests progressive wear.
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Lubricants protect machine parts against the destructive action of rust and corrosion. This feature alone puts LUBRIPLATE far out in front of conventional lubricants.
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DEALERS FROM COAST TO COAST
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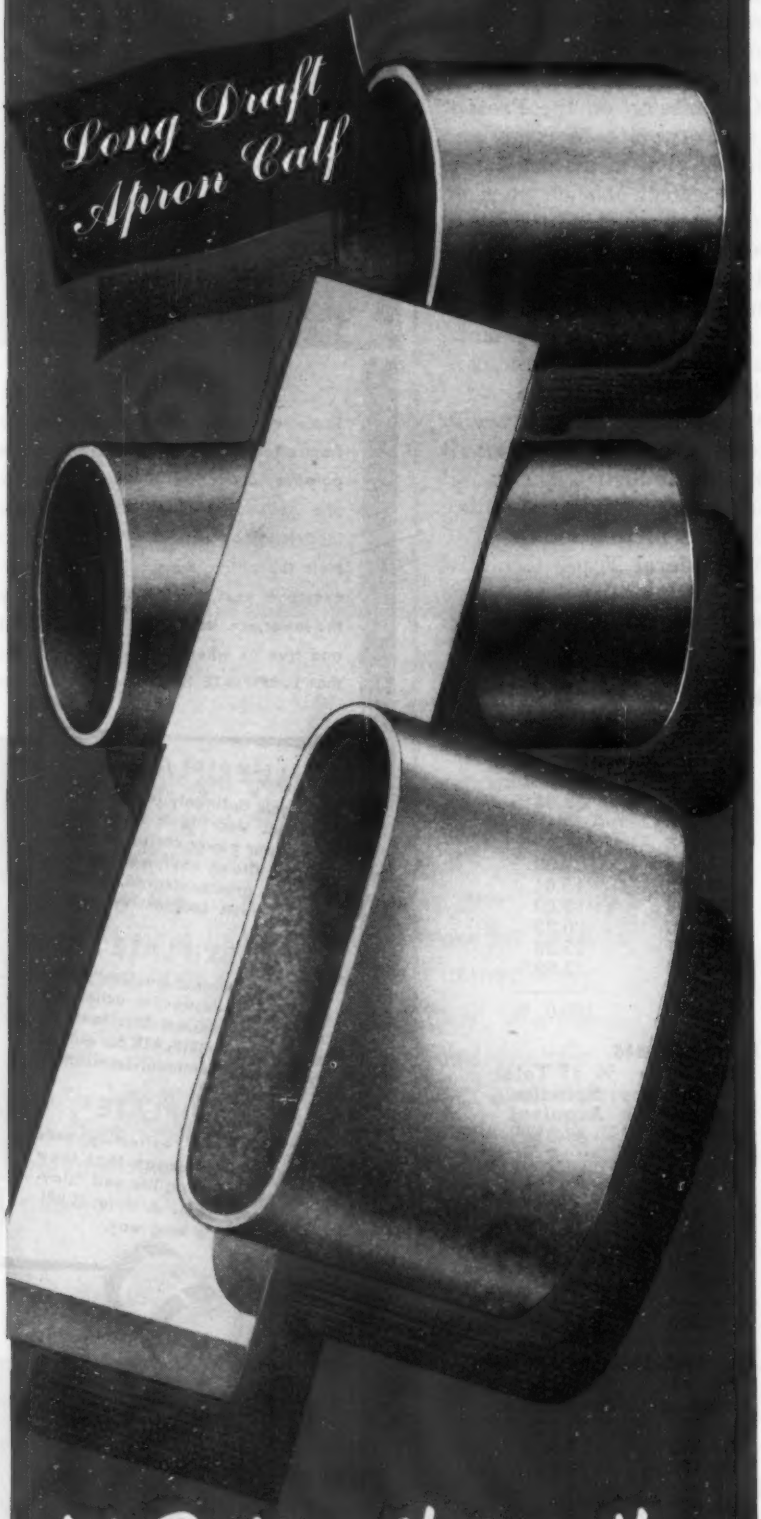
FIRST CHOICE IN APRON LEATHERS

LAWRENCE



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THAT'S WHY, WHERE QUALITY COUNTS, CALFSKIN SPINS THE YARN

A. C. Lawrence Leather Company, Peabody, Mass. Manufacturers of Lawrence Spinna Calf—top name in roll coverings.

A. C. LAWRENCE LEATHER CO. TEXTILE LEATHER PEABODY

PERSONAL NOTES

ABOUT MEN YOU KNOW

DR. HAROLD C. CHAPIN, assistant professor of chemistry in the Lowell Textile Institute, has been chosen full-time secretary of the American Association of Textile Chemists and Colorists. He became part-time secretary of the AATCC in 1933.

Mr. Parker

C. L. PARKER, formerly associated with The Dow Chemical Company, Midland, Mich., as director of the field program on Saran filaments, has been placed in charge of design for the Lumite Division of the Chicopee Mfg. Co., New York, N. Y.

The appointment of M. J. ADAMS as general sales manager of Textron Incorporated and LOWELL R. BUCKNER and FRANK H. BISE, assistant general sales managers, has been announced. Mr. Adams has been regional sales manager for the Southeast in Atlanta since 1943, and will make his headquarters in New York succeeding JAMES A. KING, who has taken up new duties. Mr. Buckner has been regional sales manager at Boston for New England and New York State since 1943. He will make his offices in New York, to be in charge of sales activities east of the Missisippi River. Mr. Bise has been in charge of the west coast regional office at Los Angeles since 1944, where he will continue to be in charge of Textron sales west of the Mississippi River.

DR. CHARLES L. MANTELL has submitted his resignation as director of United Merchants Laboratories, Inc., and has left for the Argentine to serve in a consulting capacity concerning the activities of some large industrial organizations there. Upon his return he will devote his time to his own consulting practice and laboratory, which he has maintained

until now on a part-time basis in New York.

In order to regain his health, ERNEST L. OLRICH, president of Munsingwear, Inc., has resigned from this position and from active participation in business. E. C. WILSON has also resigned from his position as executive vice-president and director of that company. COY C. HUMPHREY has been appointed president-director to succeed Mr. Olrich, and FRED E. KING has been named executive vice-president and secretary.

W. P. SMEDLEY, formerly in charge of the Duplan plant in Kingston, Pa., has been appointed vice-president in charge of all yarn-throwing production in the five plants of Duplan Corp.

WILLIAM J. DUROCHER, former manager of the Arnold Print Works, Inc., Adams, Mass., since its acquisition by the Aspinook Corp. in 1942, has been made general manager of both the Arnold Print Works and the Hampton Print Works division at Easthampton.

Mr. Beuret

WILLIAM R. BEURET, former general manager, has been appointed vice-president of the three A's—Amoskeag-Lawrence Mills, Amory Worsted Mills and Amoskeag Mills, Manchester, N. H.

L. R. WADE, the former vice-president of Adamex Securities Corp., has been appointed assistant to the president of Verney Corp. Other executive changes have been made with the appointment of HARRY BALDWIN as general manager in charge of production and JOHN MASON as Mr. Baldwin's assistant.

HARRY S. MARCH has been named purchasing agent for Nashua (N. H.) Mfg. Co., succeeding ERNEST GRAY, retired. Mr. March was released from the Army Air Forces with the rank of lieutenant colonel.

(*Continued on page* 152)

TOP NAME IN ROLL COVERINGS

LAWRENCE

It's Better Naturally

THAT'S WHY, WHERE QUALITY COUNTS, CALFSKIN SPINS THE YARN

A. C. Lawrence Leather Company, Peabody, Mass. Manufacturers of Lawrence Calfskins — 1st choice for aprons.

A. C. LAWRENCE LEATHER CO. TEXTILE LEATHERS PEABODY MASS.

ATWOOD
The Universal Winding Company has purchased the business, including plant and inventory, of the Atwood Division, Farrel-Birmingham Co., Inc., which now becomes Atwood Division, Universal Winding Company. We intend to back up Atwood machines with all our resources in manufacturing, product development and sales engineering.
Correspondence concerning Atwood Machines should be addressed as before to Atwood Division, Stonington, Connecticut.
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P. O. BOX 1605
PROVIDENCE 1, R. I.
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REG. U.S. PAT. OFF.

NEW EQUIPMENT AND MATERIALS

New Type Woolen Card

The New England Machine Works, 574 E. Main St., Waterbury, Conn., has developed a woolen card which is reported to represent a unique application of the accepted carding principles.

The production of a high quality roving at a high rate and with less floor space is cited as the purpose of this new machine. In addition, it is said that it embodies a great many refinements of design which result in more accurate and simplified settings together with greater ease of operation and maintenance.

In operation, it is said that the lower portion of the machine, consisting of six sets of workers and strippers, a fancy and a doffer, is considered the "breaker card." The main cylinder is 96 inches in diameter and the direction of rotation is downward.

A center-draw, broad-band intermediate feed is provided and the sliver is carried up and doubled on to an apron which feeds back toward the same main cylinder. At this point, a set of intermediate feed rolls delivers the sliver through a licker-in to the cylinder and eleven sets of workers and strippers are arranged along the upper surface of the machine which acts as the "finisher." Another fancy and doffer are provided to remove the stock which is conveyed to a tape condenser. Subsequent machines will have a condenser set directly over the feed to eliminate carrying the finished web, according to the manufacturer.

The main cylinder and the breaker worker and stripper rolls are clothed with No. 33 wire; the first six worker and stripper rolls of the finisher are clothed with a No. 34 wire; and the last five worker and stripper rolls are clothed with a No. 35 wire.

All bearings are described as completely enclosed and are lubricated through grease fittings. The transmission provides a very smooth and positive drive. It is said that only 7½ horse power are required for the entire machine, including Peralta rolls.

The first machine produced did not have a breast. However, space is provided for this purpose and the others will be equipped with a metallic breast, having three workers and strippers. It is also proposed to equip this card with a set of Peralta rolls built into the machine as standard equipment.

The overall length of the card is twenty-two feet. The design is such that two of these cards may be set up back-to-back and operated in less space than is now required for the conventional three-cylinder card set. The card is equipped with a very low Bramwell feed. The total weight of the complete card is less than 20,000 pounds.

A portable vacuum stripper is being built to simplify the stripping problem on this card. It is expected that this portable vacuum system will be capable of handling at least fifteen sets of cards.

The action of this card is such that fly waste is substantially reduced. This is due to the fact that, although the surface speed of the cylinder is higher than that at which the conventional card is run, there is a reduction in the centrifugal forces due to the increased cylinder diameter. Another aid in the elimination of fly waste is the reduced speed at which the strippers operate. This is made possible by the positive drive arrangement.

Another factor which is introduced by the use of a large cylinder is that the path described by a very large cylinder in moving past a worker is much closer to a straight line than that which is obtained by using a smaller cylinder. This means that the separating of stock between cylinder and worker is less abrupt with less fiber damage. The resulting carding action is more gentle and more prolonged, and the fibers are opened at comparatively high surface speeds.

New Process for Photo Reproduction on Fabric

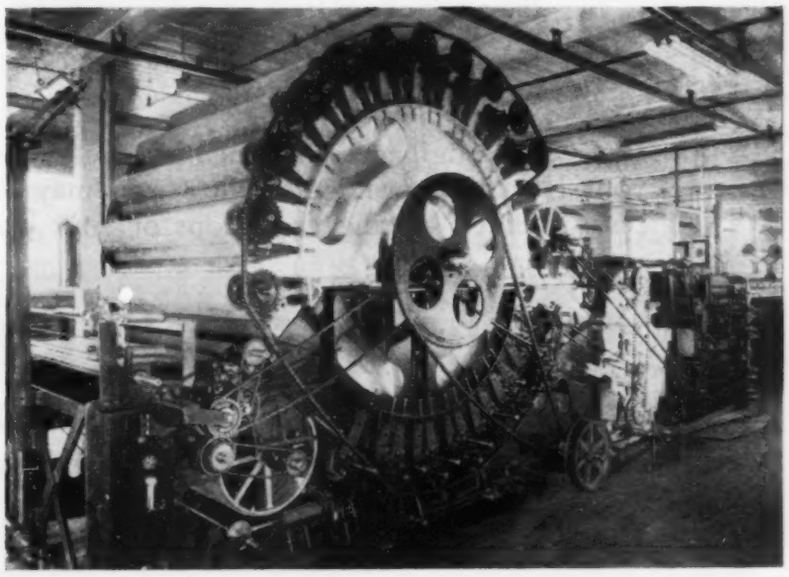
Ross-Smith Corporation, 424 Madison Avenue, New York 17, N. Y., has introduced "Photone," a new development in fabric printing. It is described as a new process for developing a photograph directly onto the fabric. The effect is said to be unique in that a third dimension quality is achieved, reproducing everything the camera sees.

According to the manufacturers, Photone now makes possible the reproduction of 32 shades from light to dark on one fabric. It is said to make some cottons like rayons and some rayons like silk.

In this process, the fabric itself is treated in the same manner as photographic paper, that is, it is "sensitized," then brought into contact with the photographic negative. Light shining through the negative prints the design on the fabric. The fabric is then "developed," resulting in photographic continuous tones on the fabric.

The process is said to be applicable to rayon, acetate, cotton, Aralac, velvets, terry cloth, and silk. It is expected to be applied first to fabrics for evening and sportswear, eventually spreading to scarves, lingerie, blouses, linens, etc.

New woolen card requires less floor space.



From single carboys ... to a fleet of tank cars

● Such is the impressive increase in the use of Becco Hydrogen Peroxide over the years. There are reasons for this growth, of course! Outstanding among them are:

- Becco Hydrogen Peroxide meets the specific requirements of industry.
- Becco Hydrogen Peroxide is quickly and easily pumped to the point of use from your storage tanks.
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BECCO'S engineers and chemists are prepared to assist you with your bleaching problems—how you may be able to obtain finest results under specific conditions of your operations. Write today!

BECCO SALES CORPORATION

AGENTS FOR BUFFALO ELECTRO-CHEMICAL COMPANY, INC.

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Synthetic Roll Covering Material

A new roll covering material described as a chemical combination of a synthetic rubber and a plastic has been developed, according to an announcement by W. D. Dodenhoff Co., Greenville, S. C., exclusive sales representative for the material.

Endurance and performance tests on "Duscot" (the name by which this material is known) have been conducted for the last two years, it is said. In one test conducted, it is reported that cots made from this new material were still running well after 6000 hours without buffing.

The following characteristics are claimed for the product. The material does resist oil and will not swell; it resists heat, having been successfully used in temperatures ranging from 40° F. to 120° F.; it resists abrasion and rolls do not groove; through a special technique of composition, it permits rolls to carry electricity, and thus materially reduces static electricity; it offers a controlled gripping surface which contributes to uniform drawing and maximum yarn strength; any regrinding can be done on standard cot buffing equipment; rolls do not lose their shape after a shutdown; and it is a homogeneous material.

Electronic Twist Setter

The Industrial Rayon Corporation of Cleveland, Ohio, has announced that patents have been issued to them on a new process for setting twist in tire cord and other textile products.

Known as Lektroset, the process is reported to consist of passing packages of the cord through a high frequency electrical field. This results in so uniform a reaction that cones containing as much as eighteen or more pounds of rayon tire cord may be effectively treated. These cones are used in the weftless method of tire construction.

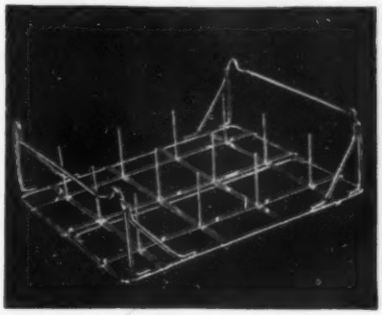
The Lektroset process may be completed in a short time, according to the announcement.

Cloth Inspecting Machine

A new cloth inspecting, measuring, and winding machine has been announced by Standard Mill Supply Co., P. O. Box 1534, Providence, R. I.

Features of the new machine as listed in the announcement include: measuring cylinder is covered with rubber fillet; measuring clock is graduated in eighths of a yard and subtracts accurately, the clock being mounted on one of the measuring cylinders; unit starts slowly and stops quickly; overhead through light inspection is afforded; and the inspecting board is adjustable vertically or horizontally for any required angle.

The machine is available with a cloth roll with a 15-inch knife for use with paper tubes or an expanding steel roll can be furnished which does not require a cloth tube, according to the manufacturer.



Stainless Steel Pin Boards

Johnson Engineering & Manufacturing Co., 173 Gilligan St., Wilkes-Barre, Pa., has recently announced that bobbin, cone, shell and quill boards of stainless steel are now being produced by that concern.

It is said that rust and replating is eliminated where these boards are used.

Magnetic Separator

A special magnetic separator known as the Eriez Magnetic Hump has been designed for air blower systems that carry loose textile fibers from the bale breaker, according to an announcement by Eriez Manufacturing Co., 2552 E. 12th St., Erie, Pa.

Another application is the installation of a bank of permanent magnets over the tops of spiked aprons of feeders.

Both of these methods are said to pull all metal pieces from the fiber as it comes in contact with the magnetic separator. Thus they are prevented from entering opening equipment where they might not only create sparks by clashing with parts of the machinery, but also cause serious damage to the opening equipment as well.

These separators are reported to maintain their strength for a period of 10 years and withstand heat up to 800° F.

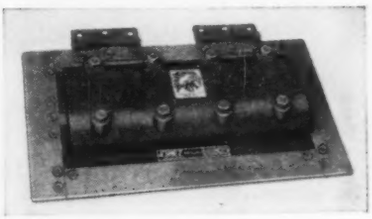
"Yarn and Cloth Calculations"

Written by Lloyd H. Jackson, a graduate mathematician and textile engineer and formerly an associate professor in the Department of Textile Engineering, Texas Technological College, Lubbock, Texas, *Yarn and Cloth Calculations* has recently been published by Textile Book Publishers, Inc., 303 Fifth Ave., New York 16, N. Y. ($6.00).

The book is described by the publisher as a text book, complete, well-arranged and technically accurate. It covers the subject by taking up, first, yarn numbering systems, then yarn conversion, ply yarns and resultant counts and grey cloth calculations. Warp, filling and cloth calculations are worked out in detail and a chapter is devoted to the theory of fabric construction. It gives complete details of fabric construction analysis, including the factors to be determined and equations to use. The subject index is inclusive and complete.

A series of relevant problems follow most of the chapters and practical equations are included to cover processing steps.

The book will be of inestimable value to textile students and engineers, technologists, yarn spinners, cost accountants, buyers, importers, exporters and fabric designers, technicians and analysts, according to the announcement.



Magnetic Separator.

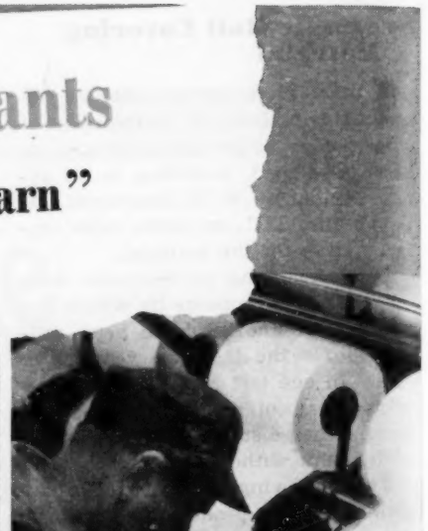
Mildewproofing Agent

Nuodex Products Co., Inc., Elizabeth, N. J., has announced the development of a new mildewproofing agent, Nuodex 100 W. D. The new product is reported to be colorless, odorless and water dispersible. According to the manufacturer, 0.1% deposited on fabrics makes those fabrics pass the standard Chaetomium globosum tests; 0.5% keeps tensile strength loss to less than 10% after two weeks burial. Further, it is said to be resistant to leaching and has demonstrated resistance to weathering equivalent to one year's Florida exposure.

Other claims made for the new product are that it will not yellow in ageing, it does not tender fabrics, and it is non-irritant. It is reported that the low cost of the product suggests its use for many "in process" applications where a fungicide can supply protection.

"Gulf Quality Lubricants help us produce Grade A yarn"

says this Overseer of Carding



(Left) The Carder of this prominent southern mill checks yarn quality against the Grade A standard. (Right) The oiler lubricates the draw roll bearings with the quality oil recommended by a Gulf Lubrication Engineer.

"RIGID CONTROL OF EVERY PROCESS and near perfect operation of every machine are required to produce Grade A yarn," says this Overseer. "Gulf quality lubricants help us get the kind of machine performance we need—and keep maintenance costs low."

Are you entirely satisfied with the performance of your equipment? With your maintenance and power costs? Perhaps some improvement is possible through latest developments in petroleum science.

Why not call in an experienced Gulf Lubrication Engineer to consult with your operating and maintenance personnel in a further effort to improve your lubrication and reduce your costs? This trained specialist will recommend the proper oils and greases for every machine, and the best methods of application—then co-operate closely to keep lubrication on a sound, scientific basis the year around.

The helpful counsel of a Gulf Lubrication Engineer—and the complete Gulf line of more than 400 quality lubricants—are available to you through 1200 warehouses located in 30 states from Maine to New Mexico. Write, wire, or phone your nearest Gulf office today.

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The announcement stated that Nuodex 100 S.S. is also available, this being the solvent or oil soluble form of Nuodex 100 W.D. It is said that this product may be incorporated in many resin base textile finishes and may be used as an inexpensive mildewproofing agent in textile mills equipped to handle volatile solvents.

Improved Acetate Dyes

For dyeing acetate rayon and nylon, Interchemical Corporation, Textile Colors Division, Fair Lawn, N. J., has announced the development of an improved line of acetate dyes, known as Interchem acetate dyes. Because they are colloidized during manufacture, these dyes are said to paste quickly and thoroughly in warm water, with no undispersed particles.

The dyes can be employed for producing either self or compound shades on boxes or on jigs, according to the manufacturer. Some dyes in the line are suitable also for application and/or discharge printing. The fastness properties of these products are reported to be similar to those of their prototypes.

Portable Infra-Red Singeing Unit

Carbomatic Corp., 24-81 47th St., Astoria, L. I., N. Y., has added a new portable model to their line of gas-fired infra-red singeing units, according to a recent announcement.

Mounted on a movable platform, the unit can, it is said, be shifted from place to place and adjusted to any position or heat focus. The unit may be used separately or as an adjunct to a permanently fixed battery of singeing units. It can also be used wherever additional drying is necessary in a textile mill, according to the manufacturer, being particularly adaptable for handling blankets, heavy cloths, rugs, etc.

The new unit is self-contained, complete with blower, gas-air mixer and controls. Various sizes of refractory may be specified.

Automatic Burette

An automatic burette featuring elimination of eyestrain has been announced by TrueTest Laboratories, Inc., 20 South 33rd St., Philadelphia 4, Pa.

Manufactured from non-corrosive glass, it is claimed that the device is resistant to the chemical action of alkaline and acid solutions. The inner column is manufactured from a special heat-fired yellow tubing, which is said to form an ideal background for the burette reading.

The column is fused to the burette at the bottom and in addition is supported at the top by a trident support which is reported to take up the shock encountered in shipment and handling.

Operation of the burette is described as completely automatic, in that the solution is introduced by applying pressure to the bulb at the reservoir until the burette is filled above the zero mark. Then, by releasing the pressure, the solution adjusts automatically to the zero graduation and all excess solution drains back into the reservoir without causing formation of air bubbles. Therefore, the usual waste and need for recording and calculating each titration is eliminated.

In addition, it is said that the stopcock is placed at an angle so that it is out of the way and consequently does not interfere with the reading of the instrument.

This burette is marketed as True-Test "E-Z-C" Automatic Burette.

Bottle Type Water Cooler

The Sunroc Refrigeration Co., Glen Riddle, Pa., has announced the addition of a new water cooler to its line. The new gunmetal electric cooler, known as US7B2, has a capacity of three gallons an hour.

Some features emphasized by Sunroc are free-flowing, push-button control on the standard model, foot-pedal control on the deluxe model, hermetically sealed compressor, and elimination of corrosion by use of stainless steel.

Principles applied in this Swiss Sulzer weaving machine are to be incorporated in five new "shuttleless loom" prototypes being developed by The Warner & Swasey Co. of Cleveland, Ohio, who have the American manufacturing rights to this machine. Basic principles of the machine provide for the introduction of the filling yarn by means of a gripper which draws the filling from a single cheese of yarn. The gripper never comes in contact with the warp yarn since it is shot through a series of guides which are introduced between the top and bottom sections of the warp when the shed is open. Guides can be seen in this photo which was made with harness level.

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EXTRA STRENGTH ---longer wear
EXTRA QUALITY ---lasting lustre
EXTRA SERVICE ---easy to wash

Bristol Develops New Time Cycle Controller

The Bristol Company, Waterbury 91, Conn., has announced the development of a new multiple-cam time cycle controller, known as the Model C500 Impulse-Sequence Cycle Controller, for timing mechanical operations in industrial processes. This instrument is designed for use on plant processes where a number of factors, such as the opening and closing of valves, switches, dampers, retorts and presses, and the starting, stopping, or reversing of motor-driven pumps, and blowers, must be accurately timed according to a fixed program.

In operation, the instrument actuates or engages, at exactly the correct time in each cycle, the necessary mechanical, electrical, or pneumatic devices for automatically carrying out the intended schedule.

In this controller, time measurement and pilot valve operation are reported to be handled by separate mechanisms. Separation of these two basic functions made possible a design that gives accurate timing of the factors under control, high speed and torque for pilot valve operation, and flexibility of application.

Timing is accomplished by a Telechron-driven aluminum disc on which is printed a 25-inch time scale. The desired schedule of operations is incorporated into the controller by cutting notches with a notching punch on the time scale. The location of these notches determines the time of operation of the cam mechanism. Discs for new cycles of schedules of operation can be easily made. There are no air or mechanical connections between the timing disc and cam-operating mechanism. Time impulses are transmitted electrically, according to the manufacturer.

The cams are individually adjustable and their setting does not require fine adjustment in order to get accurate results. Any sequence of operation can be obtained.

Axial Air-Gap Electric Motor

Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill., have introduced a new type of electric motor designated as Axial Air-Gap, in which the magnetic lines of force follow a path parallel to the shaft (or axis of rotation).

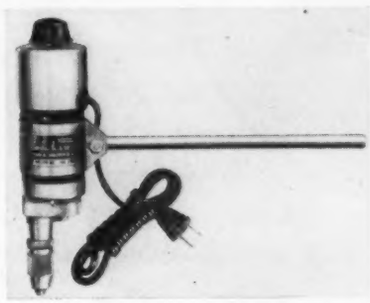
This new line of motors, ranging in size from 1/3 to 10 hp, is suitable for horizontal or vertical flange mounting, or on an angle base for belt drive, according to the manufacturer.

The features claimed are space and weight reduction. Other features, in addition to its improved appearance, are the simplicity and speed with which this motor can be inspected, cleaned and lubricated; and a cooler rotor.

Variable Speed Stirrer

Eberbach & Son Co., Ann Arbor, Mich., has announced the development of a power stirrer for use in all types of laboratories where a small lightweight stirrer with high torque and variable speed is needed.

Known as the A 77-836 Power-Stir, Variable Speed, the unit is equipped with a handy mounting rod 9 inches by ½ inch which facilitates adjustment on any support to meet the operators' individual needs, according to the manufacturer. Stainless steel propeller stirring rods, which are also available from this source, are held by an adjustable chuck.



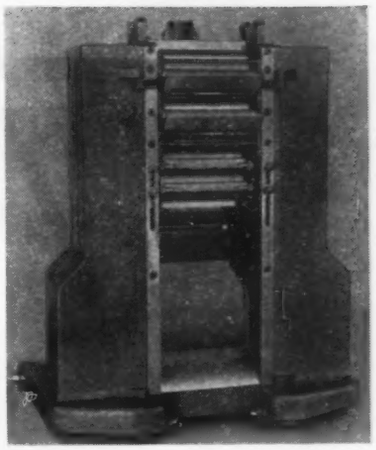
The universal, continuous duty motor is resistance controlled. A plastic knob controls the built-in rheostat. Without load, the speed range is from 450 to 1200 rpm.

New Floor Machine

A new floor machine, known as the Tornado, has been announced by Breuer Electric Mfg. Co., Ravenswood Ave., Chicago 40, Ill. It is described as a motor-driven floor brush capable of performing all types of floor work, including scrubbing, polishing, waxing, sanding, steel-wooling.

It can be used on any type of floor or floor covering with an interchange of suitable brushes and may be equipped with a solution tank which feeds directly into the base of the bristles, according to the manufacturer.

Five models are in production, ranging from ¼ hp to 1 hp, with operating brush spreads from 12 inches to 20 inches. All models have enclosed gears in cast aluminum housings and are equipped with sturdy, splash proof, continuous load motors.



Wool Fiber Conditioner

Development of a new fiber conditioner has been announced by B. F. Perkins & Son., Inc., Holyoke, Mass. This machine, with tension furnished by dual plane extender rolls, disintegrates and untangles burrs, chives, motes, dry grass, leaves, seeds, and other foreign matter from wool, making them easily removable, according to the manufacturer.

It is described as being a fully enclosed compact unit, four feet high, 20 inches wide and 14 inches deep, requiring no additional floor space because it fits close to the doffer cylinder of the breaker card.

The unit is equipped with antifriction bearings. Power requirement is reported to be small, being supplied from the doffer cylinder drive from which it is synchronized. By removing a few bolts, which attach the machine to the card, the unit can be rolled to any desired location.

Patents are said to be pending in the United States and in all important wool processing foreign countries.

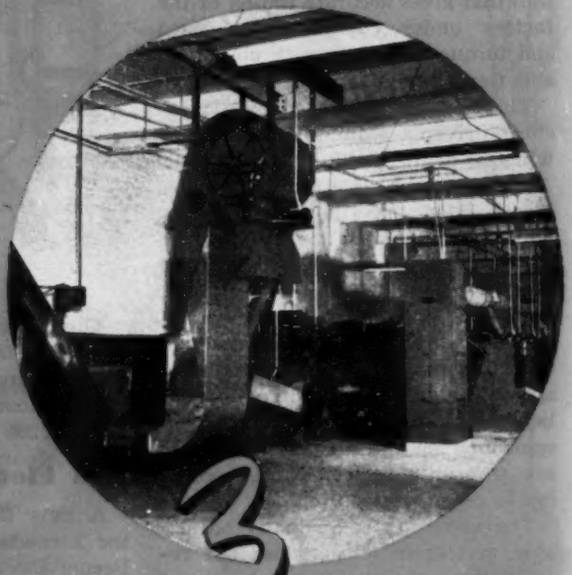
Rubber-Tired Wheels

A new line of rubber-tired wheels for industrial and domestic uses has been announced by Champion Iron Works, Inc., 2223 Gratiot Avenue, Detroit, Mich. In a range of sizes from 4" to 14" extreme diameter and from 1.75" to 3" diameter of tire section, puncture proof wheels are available with choice of sealed ball bearings, plain bronze or oil-impregnated sintered bronze bearings. The maximum standard bore is ⅝". Tires are demountable with ordinary hand tools.

A feature claimed for the wheels is the sealed and welded ball bearing hub which cannot lose balls or get out of alignment. There are no nuts, collars or washers to wear or get out of adjustment.

The Meaning of

IT IS the characteristic excellence of engineering, manufacture and performance that makes H & B quality unexcelled in modern textile machinery. Here are a few words and three pictures that tell why.



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1 The functional beginning of any efficient machinery is the drawing board. The men at our drawing boards (Fig. 1) are well equipped by talents and experience to plan and design the operation of our machinery for top performance in your mill. Blueprints, drawings and layouts are not approved by the engineering department until every development has been tested. We begin at the beginning, and we begin well.

2 The second step is the manufacture, the physical assembly of the designed machinery. Here again, experience is invaluable in producing precision parts to do a precise job. The combination of craftsmanship and mass production, which distinguishes American industry, is well exemplified by the work in our milling department (Fig. 2). The best materials obtainable are used by the best men available to produce H & B machinery.

3 Finally the machinery is installed and receives the acid test—performance in any individual operating organization. Here, as in the actual installation shown in Fig. 3, H & B machinery proves itself and rewards by superior results the care exercised in engineering and manufacture.

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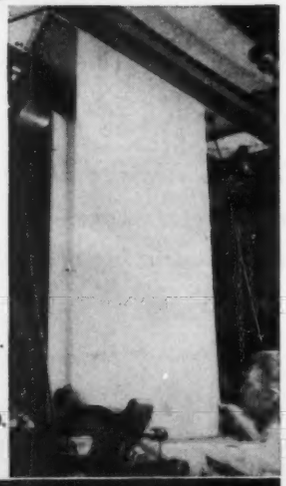

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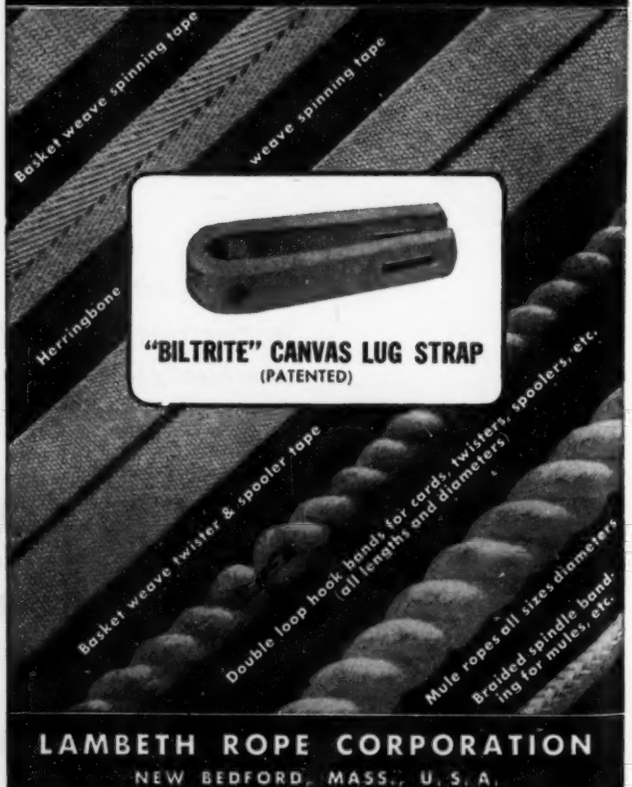
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Double loop hook bands for cords, twisters, spoolers, etc. (all lengths and diameters)
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Producers of textiles exhibited their products at the International Exposition of Textiles in New York.

Fabrics of the Future

Theme of

International Exposition of Textiles

Staff Report

FABRICS of the future for fashions of the future was the theme of the International Exposition of Textiles at Grand Central Palace in New York during the week June 2-7. The following week, June 10-14, was utilized to allow the general public to view the latest developments in textile fabrics that will be used to a great extent in fashions of the future.

Although fabrics were predominant, methods of finishing, ribbons, laces, and accessories related to the textile field were also exhibited to the trade.

Ushering in the new age of longer wearing and better quality fabrics, synthetics and new types of finishing processes for protecting household textiles and clothing against fire, water, mildew, dust, and other ravages of nature were graphically demonstrated. Many exhibitors ran special and dramatic tests illustrating these new finishes as well as showing related manufacturing processes.

The four floors of Grand Central Palace were turned into a brilliant kaleidescope of color. Over 350 leaders of the United States and 107 exhibitors from Italy, France, Holland, Switzerland, Great Britain, Belgium, and other key centers joined to present advancements in fabrics and related textile processes.

The first and second floors were devoted to exhibits covering fabrics, ribbons, laces, and fashions. The third floor contained exhibits of factory equipment designed to improve production. The fourth floor consisted chiefly of exhibits of foreign textile interests. Silks, woolens, laces, cottons, synthetics, and fashions were among these interesting exhibits. The largest number among this group consisted of 56 representatives of Italy who showed lavish silks designed and manufactured in the city of Como. France was second largest exhibitor in the foreign group, having 17 representatives showing printed silks, velvets, novelty fabrics, elastic fabrics, and sewing threads.

The United States Army Quartermaster Corps had one of the largest exhibits at the textile exposition, showing fabrics used in uniforms for every climate in the world, along with flags made of cotton, cotton and nylon blends, etc.

Textile schools were represented at the exposition. Among this group were Philadelphia Textile School, Straubenmuller Textile High School, Fashion Institute of Technology, Sequoyah Indian Weavers of Tahlequah, Oklahoma.

A feature of the Philadelphia Textile School exhibit was a special machine for testing fabrics for reactions to climatic conditions. This machine was built by members of the student body.

Some of the largest producers of textiles in the United States were represented at the exposition. Among these were Pacific Mills, Greenwood Mills, Joseph E. Bancroft & Sons, Sayles Finishing Company, J. P. Stevens & Co., Stonecutter Mills, M. Lowenstein & Sons, Onodaga Silk Co., Frankly Fabrics Corporation, Frank Ix & Sons, U. S. Finishing Company, Wellington Sears & Co., Turner-Halsey Company, Newnan Cotton Mills, and many others. The Cotton-Textile Institute was also represented by members of its staff in an attractive booth.

Although a limited amount of production and finishing machinery was on display, the International Textile Exposition was considered a success, particularly from the standpoint of fabrics, especially those for use in fashions and households.

The Textile Industry . . .

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Greatest Increase in LABOR COSTS

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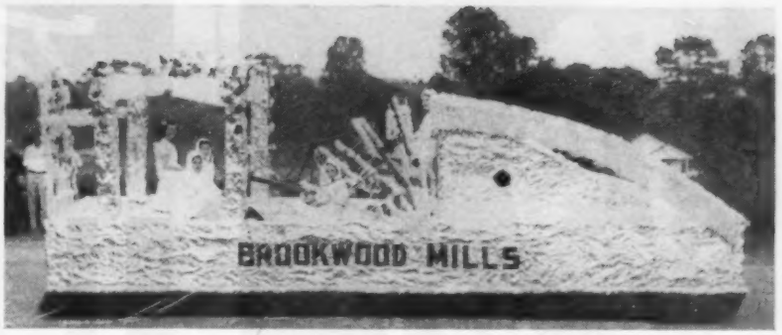
Brookwood Mills, Taylorsville, N. C., were awarded a trophy as first prize for commercial floats, one of which they entered in the commemoration festivities of the one hundredth anniversary of the founding of Alexander County, N. C., last June 5. Miss Electa Mae Chapman was selected by the employees to reign as queen of the Brookwood Mills' float.



Cotton Textiles Make Impressive Gain

Murchison Tells SC Manufacturers

CITING the impressive gains made by the cotton textile industry during the last decade in the fields of public and labor relations, research and technology, Dr. C. T. Murchison, president of the Cotton-Textile Institute, told the South Carolina Cotton Manufacturers Association at its annual meeting at the Fort Sumter Hotel, Charleston, S. C., June 6 and 7, that the industry has long since reached the position where it need not apologize "for any aspects of its operations or philosophy."

In the matter of enlightened labor relations, Dr. Murchison pointed out that in the last six years the industry "without reluctance or opposition on the part of management" has raised its wage levels 170 per cent, on a weekly basis, which is considerably more than the average for all manufacturing industries.

For every thousand spent on research before the war, the industry is now spending a million, he explained. As examples of the vastly expanded interest in research, he cited the foundations established in North Carolina, South Carolina and Georgia by mill contributions which now amount to several million dollars and which make it possible to expand the scope and effectiveness of textile education. He predicted that the Institute of Textile Technology, Charlottesville, Va., will be recognized as one of the greatest research and educational institutions in America in another five years.

The physical organization of the industry has been greatly improved through the so-called "vertical integrations" accomplished in the last several years, he went on. Contrary to many false impressions, these integrations, he asserted, do not in any way represent a trend toward monopoly or to large formations just for the sake of large units.

"Vertical integrations in cotton textiles represent an effort to provide within single management a wider range of products and better balanced production schedules. As a result, the general public will be rewarded with higher quality products and inevitable lower prices," he said.

Dr. Murchison spoke at the closing session on Saturday.

The preceding day, L. O. Hammett, in his annual address as president of the Association, emphasized the importance of increasingly close cooperation between the American Cotton Manufacturers Association and the state associations of mill executives. Mr. Hammett surmised that this policy of handling regional and national matters with and through the American Association has been found to be more effective than any other approach. "The American Association has been of much help to us in the past year, and we should continue to support its efforts in every way," he continued.

The procedure leading to the organization of a permanent personnel manager's division of the association, which would work through the headquarters in Columbia, S. C., was decided upon by the members of the association, and they plan to use the managers' division as a clearing house through which mills can pool information. This group is to meet next fall.

Continued active support for the industry's public relations program was stressed by G. Ellsworth Huggins, president of Martel Mills, who has been in charge of this work.

Greenville Textile Show Comes in October 1948

The executive committee of the Textile Hall Corporation, Greenville, South Carolina, has announced that the 15th Southern Textile Exposition will be held next year, October 4-9, 1948.

This definite statement that a textile show will be held in Textile Hall next year sets at rest the various rumors and reports that have circulated in the trade.

The management of Textile Hall reports widespread interest being shown in the next exhibition, and is confident that many applications for space will be received now that a specific date has been set.

The prospectus for the show will be issued within a few months.

The show was said to have been postponed last year because of the housing situation.

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There are good reasons for Dary dependability, reasons that center around the exclusive Dary process under which every Dary Ring Traveler is produced.

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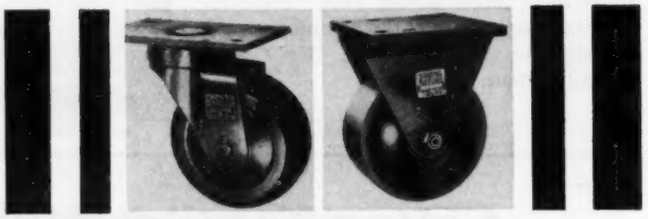

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AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

A Happy Turn of Events

The textile industry has been blessed by a turn of events that will be felt by the industry for some years to come. For a great many years the industry has been clamoring for more technically trained men. According to 1947 statistics, more than 2700 students were enrolled in full-time day courses in ten textile schools, which is nearly three times the enrollment of ten years ago. More than 300 students were graduated in textiles in 1947.

In addition to the full-time day students, there were more than 2000 students taking evening courses, and approximately 50 that were doing work at the graduate level.

The textile industry itself has become more conscious of the value of the technically trained man and at last has adopted the principle of paying a living starting salary to the men who finish their textile training. There are those in the industry who can remember the day when it was pretty rough going for the textile graduate who went to work in a mill. The pay was low and it appeared that the "post graduate" course in the plant was made unduly tough.

Mill men with their eyes on the plant organization for the future now realize that the technically trained man is a valuable asset, and they are making every effort to get these men into the plants and to keep them once they are there. There was and still is competition from sources outside the industry, which made and make more attractive offers to these men. The textile industry as a whole is the loser if it cannot retain its own specialists.

Another happy turn of events, from which the entire textile industry will benefit, is that the teachers in textile schools are now paid on a basis which more nearly approaches salaries paid by industry. For a long time the teachers in textile schools retained their jobs at great financial sacrifice to themselves. In inflated times, such as the present, a teacher in a textile school still may not be paid in accordance with men holding similar responsible jobs in industry, but the gap is not as wide. Also, though it has taken some time for both the schools and the industry to realize that the salaries of teachers should be increased, and though these present salaries may not be in complete accord with those of the industry, it is true that in times of recession the pay of the textile school teacher does not decrease as rapidly as that of men in general industry.

The textile school teacher must be a technically trained man and he must feel that he is rendering a service for his work, over and above the annual stipend that he receives.

Inasmuch as the textile schools are now making every effort to secure experienced men from the industry, it is particularly gratifying to note that in addition to financial remuneration, the teacher can still retain many of the attractive features of this profession, such as a generous summer vacation, a steady job, being with his family, the lack of pressure so noticed in general industrial life, and the retirement programs.

Although the teaching profession requires much planning for each lecture period, and is not quite as carefree as it may appear to the outsider, it is true that the teacher does have adequate time in which to carry on research projects in which he is interested, and to do outside consulting work for textile concerns. Many schools encourage their teaching staff to keep in touch with the industry by operating as textile consultants in their spare time.

The textile teacher of today is not isolated from industry. He is encouraged to maintain his contacts with textile mill men, and is in an excellent position to get an overall picture of the textile industry and what is going on within it.

These recent changes—an increase in the number of textile students, and the financial remuneration to the textile teacher—will serve to place the textile industry on a higher plane.

Textiles in South Carolina

What the textile industry means in the economic and social life of at least one textile state is very clearly illustrated in the recently released annual report of the South Carolina Department of Labor.

A CHECK EVERY 28 SECONDS!

Money to ease the financial burdens created by accidents, sickness, hospitalization, and death is now flowing from the Provident to policyholders and dependents at the rate of 916 payments each working day—or a check every 28 seconds!

Many thousands of these "emergency income" payments are received each year by the nearly two million workers and dependents protected by Provident Group Insurance Plans which can be written to include all of the following features:

Life Insurance
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Surgical Fee Reimbursement*

*May be extended to dependent members of the employee's family, if desired

Full details on request

South Carolina's legislature has often been prone to take lusty swings at the cotton mills, and it is quite possible the law-makers would not be so anxious to enact punitive legislation if the voters of the state could be convinced that a blow at textiles is in reality a blow at their own social and economic welfare.

Looking quickly at the record in South Carolina for the fiscal year ending June 30, 1946, the record shows that of all the jobs provided by industry in South Carolina, the textile mills supply 71 per cent! In short, almost three out of four industrial employees in that state are employed by textile mills.

Wages? Of total industrial wages, textile mills pay 74 per cent. Seventy-two per cent of the total valuation of industry's annual production may be scored up to textiles, as well as 45 per cent of the invested capital.

Those figures indicate what a tremendous stake the people of that state have in the textile mills.

As we have preached in this column on numerous occasions, the textile industry must become more public relations minded. And to this writer that means beginning at home. It means each textile plant telling its story to its own community—a story of jobs, of payrolls, of taxes, of community development and civic pride. It means building a sound basis of factual knowledge which will show what your plant means to its community.

Drop a stone in a still stream. Watch the ripples spread outward. When each plant is doing an adequate public relations job its spheres of influence will touch and will overlap, and you can be sure then that the ripples will reach the state capitols of all the textile states, as well as the city on the Potomac.

Words of Wisdom

The *Congressional Record* recently carried an address made by Senator Burnet R. Maybank which contained much food for thought. Speaking on the subject, "Postwar Difficulties of Cotton Farmers and Cotton Manufacturers," Senator Maybank pointed out some of the dangers evident in the various plans for the control of international trade, and stressed in particular the dangers to America's textile industry.

"If our world policies," said the Senator, "result in depriving our American textile workers of their jobs and in transferring the employment to foreign workers, where will our surplus textile workers find employment in America? Most of the farms in the Southeast offer an income which is inadequate. If we lose over a fourth of our productive machinery to foreign countries, it means the loss of over a fourth of our textile jobs to foreign workers. That may be good for a new world order and for the foreign workers who find new and remunerative employment, but what of our own American workers who lose their jobs as a result? It is ideal to be a benevolent promoter of world welfare but what if we cripple ourselves permanently in helping others?"

To us it seems that the Senator is speaking words of wisdom. Some of the plans for international control of trade and tariffs now being considered by our State Department sound, as we have mentioned before in this space, like some sort of super-colossal OPA-CPA-NRA.

The Senator's remarks are interesting, and they are full of facts which have an important bearing upon the future of the industry and all its employees.

◆◆◆

Personal Notes

(*Continued from page* 135)

RAYMOND R. RICE, who has been with the Pulaski, Va., hosiery firms in executive capacities for 10 years, has been elevated to the position of president-treasurer, following the resignation of WALDEMAR WALLNER. Included in this firm are the Virginia Maid Hosiery Mills, Inc., Wallner Silk Hosiery Mills, Inc., and the Acme Hosiery Dye Works, Inc. To succeed Mr. Rice as vice-president, the Virginia Maid board has elected RALPH VOLLMERS, New York City; the Wallner directorate named FRED COLE, Pulaski, and directors of the Acme firm elected DR. FREDERICK DELP.

WOODROW W. CARRUTHERS, former assistant purchasing agent, has been named purchasing agent for the Cone Mill group, to fill the vacancy left by the death of ARTHUR C. GOODWIN.

J. H. McFARLAND, general sales manager of the carpet division of James Lees & Sons Co., Bridgeport, Pa., was elected vice-president of the company. He replaces the late C. R. WRIGHT.

HOWARD V. BUSSIERE, woolen and worsted carding and spinning technician, has been promoted to overseer of spinning at the Pentucket Mills, Haverhill, Mass.

FRANK KOHLSTROM is now overseer of carding at Pine Fabrics, Inc., Worcester, Mass.

Obituaries

GERRISH H. MILLIKEN, 69, president of Deering-Milliken & Co., Inc., died last month on the golf course at Southampton, Long Island, New York.

JAMES T. BROADBENT, 73, former president of Standard Textile Products Co. and general manager of the Mobile and Selma Cotton Mills and Albion Kaolin units of Standard Coated Products, a division of Interchemical Corp., died of a heart attack in New Bedford, Mass., on June 1.

ARTHUR ROSS, 72, industrialist and former owner of three mills and two railroads, passed away in his sleep at his home in Asheboro, N. C., recently. At the time of his death, Mr. Ross was co-owner with his son, Arthur, Jr., of Tip Top Hosiery Mills at Asheboro.

FRANK L. DUNN, 57, founder and president of Dunn Textile Co., Inc., of New York and vice-president of Dunn Woolen Co., Martinsburg, W. Va., died in New York the early part of May.

GEORGE J. SWIFT, 65, vice president of Leakesville Woolen Co., and former blanket department head of American Woolen Co., passed away last month in Newark, N. J.

WALTER L. HOLT, 53, secretary-treasurer of Vance Knitting Co., Kernersville, N. C., passed away in Greensboro, N. C.

JOSEPH WEST, 78, retired hosiery manufacturer who was formerly connected with Black Diamond Knitting Mills and Pennant Knitting Mills, died recently.

WOODBURN C. WININGS, 54, manager of Goodyear Tire and Rubber Co.'s mechanical goods division in Akron, Ohio, died May 10 of a cerebral hemorrhage in Brunswick, Ga.

GEORGE E. PRICE, JR., 57, purchasing agent for Goodyear Tire & Rubber Co., died the latter part of May in a hospital in Akron.

Colors to PLAY with...
CALCOSOL* and CALCOLOID*
Vat Dyes
Many of the gay, color-bright play clothes and bathing suits seen at resorts this summer owe their beauty and fastness properties to CALCOSOL and CALCOLOID vat dyes.
These two groups embrace a wide range of colors for cottons, linens, rayons and mixtures—with extraordinary fastness to sunlight, salt water, perspiration, chlorine and exposure to weather.
Consult your Calco representative on the most effective methods of applying these modern, improved vat dyes. CALCO CHEMICAL DIVISION, AMERICAN CYANAMID COMPANY, Bound Brook, New Jersey.
New York, Chicago, Philadelphia, Boston, Charlotte, Providence.
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Reprints of this advertisement suitable for framing and without text will be sent on request.
Calco

What's in a Cone?

"Paper," you say, and that would be right, if you qualified the statement to include a laboratory formula—especially developed from nearly 50 years of experience. And to that description you should then add a binder, a treatment, and even a special machine—several machines in fact—and still you could go on, if accurate, and recall that a finish, a color, to say nothing of a size, thickness, nose, taper—all, are a part of what's in a cone...(no specialties included) You might even wonder, "Is it worth it, for a one-time-use paper carrier?"

But of course the textile industry has been answering that question for a long time.

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AN OLD TIMER SAYS

In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Readers who have been following Old-Timer throughout the years never know what to expect next from the Old Fellow. With this issue is started a series of timely paragraphs, appropriately called "Random Thoughts." Old-Timer will punch hard in some instances, and you may well believe that he is referring to you — if so, it is not his fault, but yours. His regular discussions will appear, with "Random Thoughts" being injected at intervals.

RANDOM THOUGHTS:
Ability to Teach

THE SUCCESS of an executive is dependent upon his ability to pick men. This reasoning applies to any assistant overseer, overseer, superintendent, or manager. However, most of us do not have a large list of men from which to pick. The supply certainly does not meet the demand. This being the case, the success of any overseer, superintendent or manager is more dependent upon his ability to teach or instruct his men and to get their unselfish cooperation.

For example: When OLD-TIMER was given a section of looms, he certainly did not know how to fix looms. This startling discovery was revealed when he found out (merely by chance) that some looms on his section would get out of fix almost every day, while on other looms he would not have a job until the warp ran out.

This he could not understand, but he was determined to find out why some looms would run for weeks without getting out of fix while others required working on everyday. If he could find a way to cause more looms to run for weeks without losing time to be worked on, he would greatly increase production on his section and save himself a lot of work. How he did just that is a rather long story, but it has been told in detail on this page. As a result of the system of loom fixing that he adopted, he was promoted to overseer (he never worked as assistant overseer).

Then his problem was not only to teach his loom fixers that system *but to see that they used it.* The loom builders brought overseers and superintendents from other mills to see this weave room run. Result again, OLD-TIMER was promoted to superintendent. Then a modification of his system of loom fixing was inaugurated in carding and spinning departments, with the same simple but production producing results.

This is a true story which emphasizes the fact that the success of any operating executive is most dependent upon his ability to teach what he knows, to his associates and to perfect a system which will insure their following his teaching.

RANDOM THOUGHTS:
A Working Knowledge of Psychology

DO YOU KNOW that a working knowledge of psychology is, today, far more important than a working knowledge of machinery? After all, plain, common sense is the basis of that high sounding word—psychology.

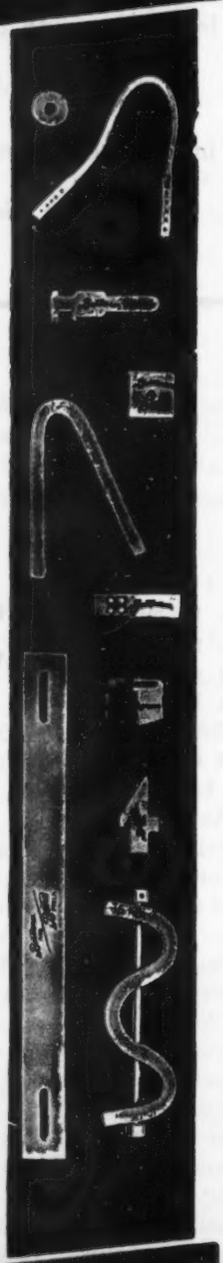
An expert loom fixer can show and tell you how to set up a loom, but you can't run a section until you know how to apply that knowledge. By the same token you are endowed with your portion of God-given "common sense," but a study of psychology will teach you how best to apply that common sense in working people.

Why don't you go to your public library and read books on elementary psychology? If the books are not at your library, then buy them. They are not expensive.

The wise expenditure of money is the foundation of economy. Meditate on this one.

Old-Timer's "Random Thoughts" will appear, as the title indicates, at random.

TEXTILE LEATHERS
bearing the name
ORIGINAL and GENUINE
Bondaron
REG. U. S. PAT. OFF.
"The Leather with the Hair On."
LAST 2 to 5 times LONGER



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cost slightly more than ordinary leathers—BUT they

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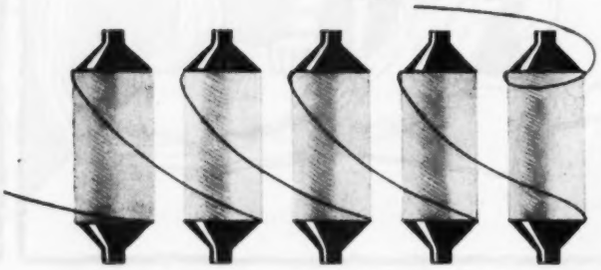

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TWENTY-NINE YEARS' NATIONWIDE EXPERIENCE
IN INDUSTRIAL AND TEXTILE DEVELOPMENT

WHAT THE

TEXTILE MILLS

ARE DOING

Southern Webbing Mills, Greensboro, N. C., has completed a two-story addition, at a cost of more than $350,000, which doubles the size of its plant and offices. Twenty new looms are being installed to supplement 22 which have been in operation, also new rubber covering machines, and a finishing machine, all of which will provide facilities for 100 per cent greater production. The corporation, using high-productive machinery, produces elastic webbing for overalls, workmen's suspenders and underwear.

In recognition of its outstanding industrial accident prevention record, Orr Mills, a division of M. Lowenstein & Sons, Inc., New York, has received the Liberty Mutual Insurance Company's blue and white accident prevention flag. The company's record of 1,028,230 man hours without a lost time accident from August 23, 1946, to March 8, 1947, was compiled through the united cooperation and effort of all the employees.

Operating control of the Union Bleachery, Greenville, S. C., has been purchased by the Aspinook Corporation and its affiliated companies. The Union Bleachery is equipped to bleach, mercerize, and dye all constructions of cottons and specializes in the processing of the many constructions of rayon and synthetic fabrics suitable for the sports wear trade.

The Graniteville Co., Graniteville, S. C., was presented with the National Safety Council's Distinguished Service to Safety Award at a recent barbecue celebration at the Girl Scout Cabin in Graniteville. Ray Ketchmark, textile staff representative of the Council, made the presentation.

Mr. Ketchmark presents the Safety Award to S. H. Swint of Graniteville Company.

Applications can now be made for the textile scholarship award of the Textile Scholarship Foundation of Clifton, N. J., which is sponsored by the Martex Print & Dye Works, Inc. The most deserving applicant selected will be sent to the Philadelphia Textile Institute for a three year course in textile chemistry or textile engineering. Martex has agreed to provide a position for the student selected upon the completion of his textile education, on condition that he attain qualifying grades. During the summer months, he will also be able to gain practical experience at the Martex plant.

Stabilizing of rayons to the "Sanforset" standard will be done by the Riegel Textile Corporation in the new addition to the rayon finishing plant at their Ware Shoals, S. C., division. The addition, which began operations last February, is equipped

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GREENVILLE • SOUTH CAROLINA
Engineers
TEXTILE MILLS • RAYON PLANTS • KNITTING MILLS • DYE HOUSES
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CHEMICALS FOR
SIZING • REDUCING
DESIZING • WETTING
STRIPPING • FINISHING
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WASHINGTON SQUARE, PHILADELPHIA 5, PA.
Manufacturers of chemicals for the Textile, Leather and other industries . . .
Plastics . . . Synthetic Insecticides . . . Fungicides . . . Enzymes

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Free samples of our "Flexloc" Self-Locking Nuts — "Draper" or American Hex Standards—are yours for the asking.

"Flexloc" packs maximum usefulness in minimum space because it is rugged, self-locking, compact—and is therefore becoming increasingly popular and this applies alike to U.S.S. and S.A.E. thread series.

Every thread—including the locking threads—takes its share of the load.

Covers a wide range of tolerances—from low No. 1 to high No. 3. Can be used over and over again without losing much of its locking ability.

Being a "stop" nut, it stays locked in any position on a threaded member.

"Flexloc" Thin Nuts are especially popular, because their tensile is so high.

Sizes from No. 6 to 1" in diameter — MILLIONS IN USE. Can be made of all commercial metals such as Steel, Stainless Steel, Brass, Bronze, etc. Some of the largest mills have found them to cut maintenance, radically.

Convince yourself with a few free samples

OVER 44 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PA. BOX 582

BOSTON • CHICAGO • DETROIT • INDIANAPOLIS • ST. LOUIS • SAN FRANCISCO

DON'T SWEAT OVER WET PLANT DETERIORATION ...RUST OR FUNGUS

STOP THEM WITH AMAZING DAMP-TEX ENAMEL

The Damp-Tex system of painting stops rot, rust, bacteria and fungus growth. Puts a porcelain-like finish on wet or dry wood, metal, concrete and plaster with equal ease and efficiency. Damp-Tex resists steam, 2% caustic solution and lactic acid. Comes in white and colors. Used in over 4,000 plants. Send for details of our trial offer.

STEELCOTE MFG. CO. • ST. LOUIS, MO.

Canadian Manufacturer: Standard Paint & Varnish Co., Windsor, Canada

for the bleaching, dyeing, printing and stabilizing of rayons and rayon blends.

The Clark Thread Co. has disposed of its entire mill property at Newark, N. J., as well as the branch mill at Bloomfield, N. J., and will remove the plants to new mills now in course of construction at Albany and Thomasville, Ga. The plant at Newark has been in service for spinning, finishing and other operations, while the Bloomfield mill has been given over to dyeing.

Lowell Bleachery, South, dyeing, bleaching and finishing, has arranged for a branch mill, to be used as a dyeing and finishing service, at Experiment, Ga., and is to be comprised of a one-story building.

United Process, Inc., recently organized with a capital of 1000 shares of stock, no par value, has plans to operate a textile flocking and coating mill in Eastondale, Mass. Alfred H. Pagell, Eastondale, is president.

Lowell (Mass.) Covered Rubber Thread Co. has received OHE approval for a one-story addition to the mill, estimated to cost approximately $20,000, exclusive of equipment. Erection contract will be awarded soon.

The Columbus Manufacturing Co., Columbus, Ga., has been purchased by the West Point Manufacturing Co., West Point, Ga.

Grip-Tex Corporation, covered rubber thread manufacturers, has established new and larger headquarters at 224 Hartwell Street, Fall River, Mass. The company was formerly located at 192 Anawan Street.

A new screen printing concern, Precision Printers, Inc., Fall River, Mass., is now in operation in a section of the former Stevens mill property. Carl Riel, Somerset, Mass., is in charge of production.

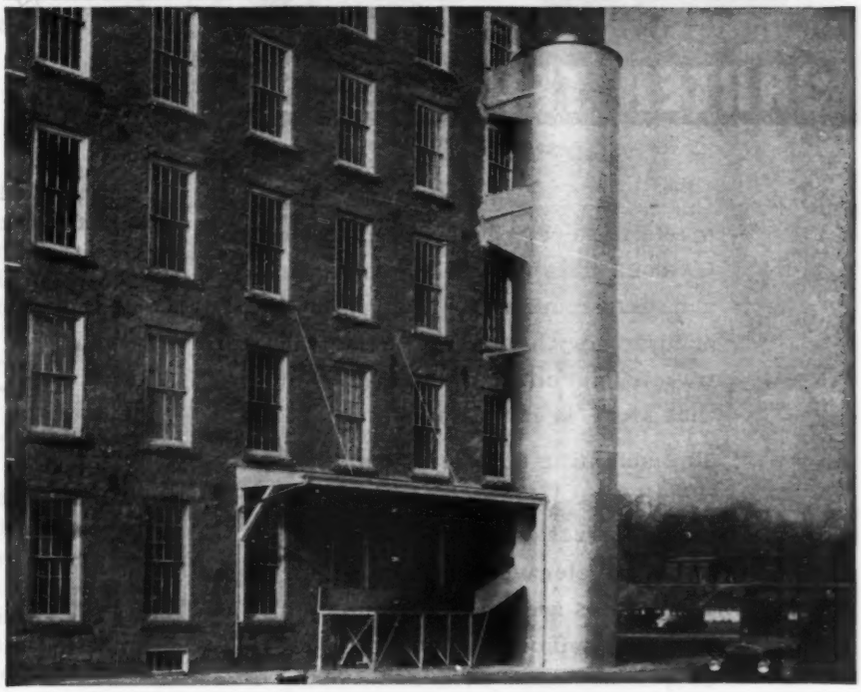
Andover Weaving Company, Andover, Mass., is now in production in the River Works building of that city, doing commission weaving on woolens and worsteds. It is reported that operations will begin with only six looms, but expansion is anticipated as business progresses. Gordon M. Gaunt is proprietor.

Campbell Wiper Supply Co., weavers of silk cloths used in cleaning precision machinery, have moved into their own two-story and basement building at 350 Greene Street, North Andover, Mass. They were

Mathews

SPIRAL CHUTES

Engineered to serve Production



Sheet Metal Spirals are ideal for lowering bales, bags, and packaged materials from upper to lower levels quickly and without damage. They can accommodate practically any number of floors and can be arranged with intermediate receive and discharge stations, as required. Spirals can be installed outside the building, as illustrated above, or inside the building. They take up very little floor space and are frequently installed in existing shafts or wells. Intake and outlet points are fully protected by fire doors which are controlled by fusible links. There is a Mathews Engineer operating in your vicinity. Ask him about spiral chutes, and the many other types of Mathews Conveyers which are engineered to serve production. Write or wire today.

MATHEWS CONVEYER COMPANY
ELLWOOD CITY, PENNSYLVANIA
SAN FRANCISCO, CAL. • PORT HOPE, ONT.
ENGINEERING OFFICES IN PRINCIPAL CITIES

TEMPER TESTED

For Perfect Fit

CARTER TRAVELERS

There's more than meets the eye when you inspect a CARTER TRAVELER. Expert eyes can determine the precision and accuracy with which each sized traveler is cut and shaped—but that alone is not enough.

The scientific control of a modern metallurgic laboratory makes possible correct, uniform temper in every traveler we produce. CARTER TRAVELERS are carefully tempered to permit sufficient spring for quick, easy installation without breaking—and to insure perfect, tailor-made fit on the ring flange.

Thirty-one years of increasingly better quality and service at the same low prices.

CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
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HARD CHROMIUM PLATING

is used by

WHITIN

MACHINE WORKS

WHITINSVILLE, MASS.

to Help Combat Wear

ON TEXTILE MACHINE PARTS!

Whitin Machine Works, Whitinsville, Mass., manufacturers of widely known textile machinery, makes extensive use of Hard Chromium Plating on Bottom Rolls, Top Rolls, Thread Guides and other parts subject to wear or corrosion.

WHY DOES CHROMIUM MEAN LONGER PART LIFE?

Metallic chromium is the hardest known commercial metal that can be electroplated. It is impervious to alkaline solutions and can be applied to most metals. Chromium protects the underlying metal, and materials or liquids can be easily wiped from it to leave a clean surface, an important advantage where a quick change of colors is involved.

Send us a trial lot of your textile machine parts that need protection against wear and corrosion. We'll WALHARD them and return them to you for comparison tests!

Walhard

Assures The Best In Hard Chromium Plating

WALTON and LONSBURY

78 NORTH AVENUE, ATTLEBORO, MASSACHUSETTS

formerly located, and have been for many years, in the Everett Mills building, Lawrence, Mass.

Warley Worsted Mills, Inc., Lowell, Mass., has been chartered with a capital of 500 shares of stock, to operate a yarn mill in Lowell. Vincent J. Cockroft is president and treasurer.

General Processing Co., Westboro, Mass., fiber products, has plans for a one-story addition to the mill. The project has been authorized by OHE but no estimate of the cost has been announced.

National Automotive Fibres, Inc., Detroit, Mich., has let contract for a one-story addition, reported to cost about $60,000, with equipment.

Lowell Weavers, Inc., has been chartered with a capital of $75,000, to operate a rayon mill in Lowell, N. C. C. C. Fisher, Lowell, is principal incorporator.

Robbins Cloth Mills, Inc., Robbins, N. C., rayon fabrics, has begun an expansion and improvement program to increase capacity in several departments. No estimate of the cost has been announced.

Hannah Pickett Mills, Inc., Rockingham, N. C., print cloths, sheetings, etc., has been acquired by J. P. Stevens & Co., New York, N. Y. A reported consideration of $850,000 was given for the mills, which will be continued in service by the new owner as heretofore.

Maganel Mills, Inc., Salisbury, N. C., cotton yarns, has begun an expansion program at the plant, and additional machinery will be installed for increased capacity.

Leon Gabai & Sons, Philadelphia, Pa., manufacturers of linens, tapestries, etc., have removed their factory to new quarters at 515-17 Market St. where increased capacity will be carried out.

Langley Mfg. Co., Clearwater, S. C., cotton goods, has asked bids for the erection of a warehouse building, and for a third-floor addition to the present mill unit. The company is an interest of United Merchants & Manufacturers, Inc., New York, N. Y.

Berkshire Fine Spinning Associates, Inc., Providence, R. I., has purchased a tract of land near Erwin, Tenn., to be used as the site for a new mill, plans for which will be prepared soon. It will comprise several buildings, with a boiler house, machine shop and other auxiliary

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BUYING OR SELLING TEXTILE MACHINERY, Comer is the company which gets results in a hurry. We have procured equipment for mills in Europe; we've transferred it from Canada to South America, from the U.S.A. to India.

To contact Comer means you will gain quick access to sources of machinery needed for increasing your production efficiency. It also means finding a ready market for textile equipment you wish to sell. Our service is world wide—so *wherever* your mill may be—*Contact Comer today!*

"SALES AROUND THE WORLD"

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Cable Address: COMACH

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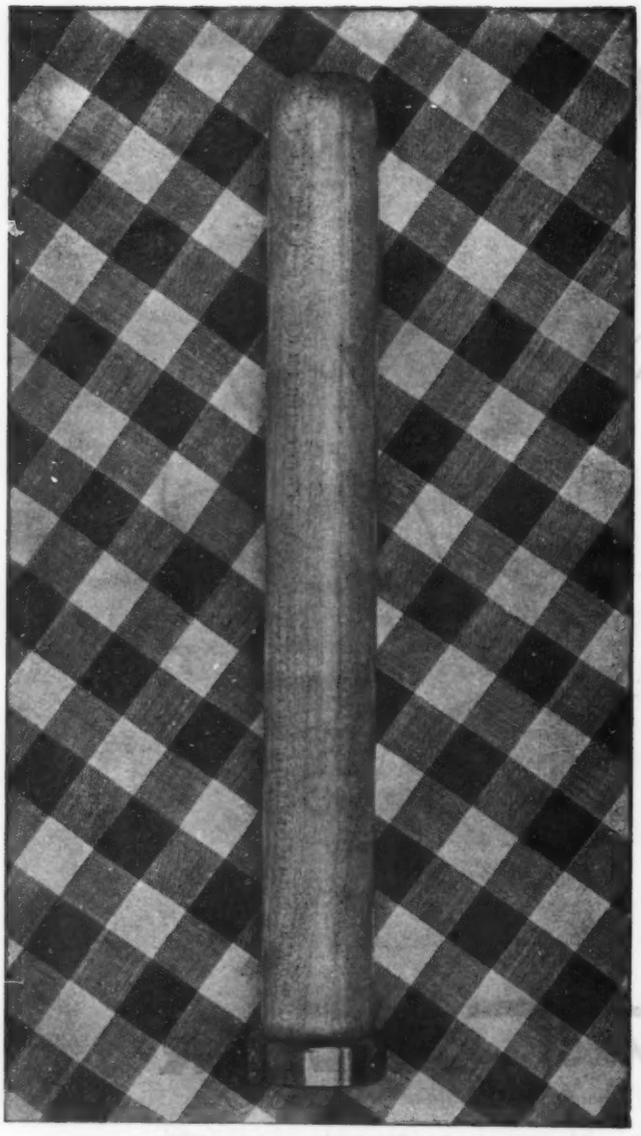

PRECISION BOBBINS

Every New England Bobbin is checked for balance and concentricity of bore and outside diameter . . . tested on customer's own spindle.

Every New England Bobbin must be PRECISION.

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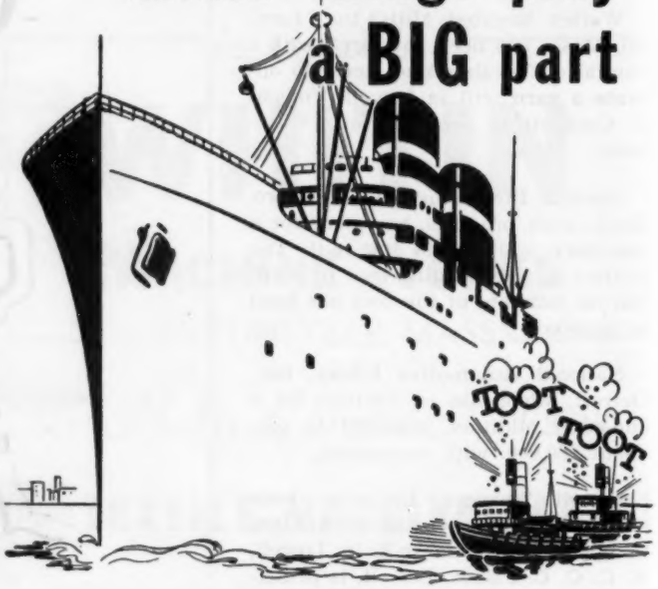
Little things play a BIG part



. . . in low-cost yarn production

Aprons can push yarn production costs around just like tugs do a liner. They're little—but the way they fit, grip and wear is vital to production, quality and costs.

The *precision* fitting of KENTEX Aprons has earned them an enviable reputation in the textile field. Made of finest quality leather, by skilled craftsmen, they are *michrometer gauged* for thickness, width, length and circumference. *We guarantee a sure fit.*

Write for prices and free samples of KENTEX precision-built Aprons.

KENTEX
PRECISION
APRONS

TEXTILE
APRON COMPANY

EAST POINT, GEORGIA

structures. No estimate of the cost has been announced, but will represent a large investment.

Equipment from the Dallas (Tex.) Cotton Mills Co., including about 300 looms, will be transferred to a mill of the Fort Worth (Tex.) Cotton Mills, owned by same interests, where expansion will be carried out.

Construction of a new factory of the Esmond Mills, Ltd., at Perth, Ontario, is nearing completion. Cotton and part-wool large blankets and baby blankets will be manufactured, and plans call for the doubling of capacity in the next two years.

Nashua Mfg. Co., Nashua, N. H., in order to keep its employees informed of company progress, has plans to write a series of letters to its 4,500 employees, advising them on the "State of the Textile Business." The first letter in this series has been mailed.

Gate City Cotton Mills, Exposition Cotton Mills and Scottdale Cotton Mills, all in the Atlanta, Ga., area, have sponsored athletic and recreation programs for the school-age children in their mill-area communities. The physical facilities are furnished by the mills and recreation and athletic equipment is furnished jointly by the mills and the YMCA.

General Jonathan M. Wainwright spoke briefly at the dedication of a monument, the first of its kind to be erected by industry in Georgia, at the plant of Pacolet Mill No. 4, Gainesville, Ga. The monument is in memory of the seventeen men from Pacolet who were killed during World War II.

Arms Manufacturing Co., Manchester, N. H., has purchased additional property in the former Amoskeag mills and have formed an affiliate, Stark-Amoskeag, which will weave wool interlining and other woolen specialties.

Aldon Spinning Mills, Talcottville, Conn., which have leased for the past three years the former Talcottville Woolen Mill property, have just purchased the structure, added new machinery and are constructing a two story brick extension.

Quissett Associates, Inc., New Bedford, Mass., an organization headed by Milton Katay and David Greenberg of Paterson, N. J., have bought the former Quissett Mill property from Plymold Corporation.

NEW PUBLICATIONS OF TEXTILE INTEREST

Carrier Corp., Syracuse, N. Y. A.I.A. No. 30-F-2 entitled "Air Conditioning for the Textile Industry." This booklet has been prepared to tell what true air conditioning is and what it can mean in dollars and cents.

United States Dept. of Agriculture, Agricultural Research Administration, Washington 25, D. C. A research achievement sheet which describes seven devices for determining the shape, length, surface structure and other characteristics of fibers, as developed by Dr. John I. Hardy, research scientist of the Bureau of Animal Industry.

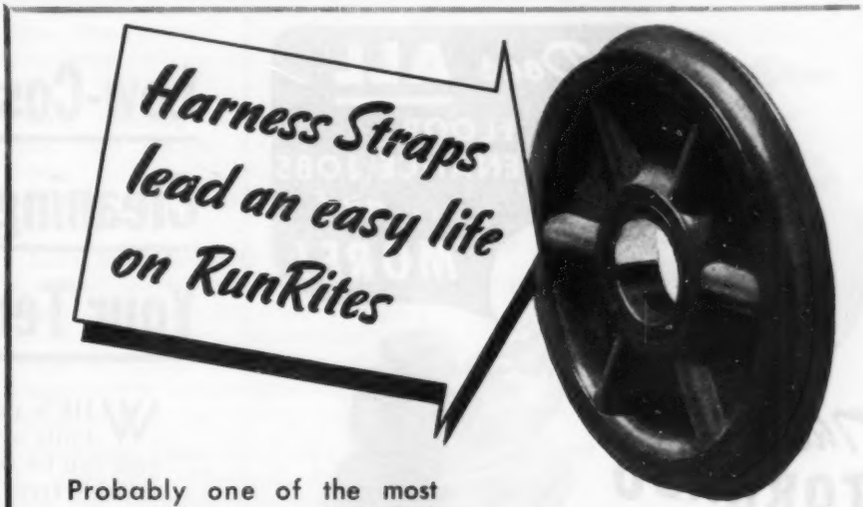
A. J. Gerrard & Co., 221 North La Salle St., Chicago 1, Ill. Two pamphlets, entitled "Steelbinder" and "Bulkbinder," which illustrate and describe these two products as manufactured by this company.

Plibrico Jointless Firebrick Co., 1800 Kingsbury St., Chicago 14, Ill. A bulletin covering the Plibrico rubbish destructor, an air-cooled incinerator which is erected in four standard sizes to meet the requirements of practically any industrial plant or institution. This incinerator is specifically engineered for the rapid burning action of dry rubbish and all material readily combustible.

John Waldron Corp., New Brunswick, N. J. Mechanical Handling Bulletin No. 120, which has been prepared because of the growing need for general information concerning the mechanical handling of paper, cloth, artificial leather, transparents and other materials that are to be processed in web form.

Manheim Mfg. & Belting Co., Manheim, Pa. V-Belt-Veelos V-belt catalog which describes features of the adjustable V-belt, construction details, illustrates how to couple and uncouple, measure and install. Also includes engineering data and application photos showing installations in wide variety of industries.

Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J. A paper entitled "Studies of Wool



Probably one of the most valued advantages of RunRite Plastic Sheaves is their ability to lengthen the service life of costly harness straps. The surface of RunRites is hard and smooth . . . no abrasiveness whatsoever. Special precision bearings keep them running true. No dusting. Once RunRites are installed they need no further attention.

RUNRITE Plastic Sheaves
NATIONAL PLASTICS, INC KNOXVILLE 2, TENN.

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EMMONS LOOM HARNESS CO., Lawrence, Mass. HENRY H. HERSEY, Greenville, S. C.
WATSON & DESMOND CO., Charlotte, N. C. HARRIS MANUFACTURING CO., Atlanta, Ga.

DYESTUFFS
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Manufacturers of Dyestuffs
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Does ALL FLOOR MAINTENANCE JOBS ... and MORE!

Tornado Floor Machine equipped with solution tank

The TORNADO FLOOR MACHINE

is fast, thorough, reliable. Exceptionally easy to handle and operate, it is remarkably quiet and can be used on any type of floor or floor covering for scrubbing and polishing, resurfacing or dry cleaning. It is a sturdy, practical proven machine with many special features which give improved performance.

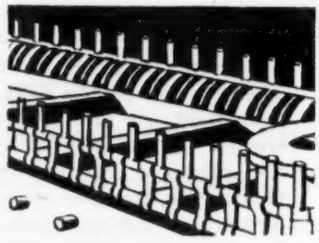
And—spic and span surroundings increase worker morale and efficiency.

Write today for Literature or Free Demonstration

Learn what this versatile floor machine can do for YOU

BREUER ELECTRIC MFG. CO.
5084 RAVENSWOOD AVE., CHICAGO 40, ILL.

Low-Cost Cleaning of Your Tentering Chains



WHEN care of tenter chains and clamps is built around economical Oakite cleaning, you can be sure of less cloth contamination . . . trouble-free frame operation.

Periodically, spray chains with hot Oakite detergent solution, using air pressure applied through the Oakite Solution-Lifting Gun, Model No. 391. Then, at overhaul time, immerse chain sections and clamps in tank of hot Oakite solution, rinse, dry and relubricate. Write TODAY to Oakite Products, Inc., 260 Thames St., New York 6, N. Y., for free data.

OAKITE
REG. U. S. PAT. OFF.
SPECIALIZED CLEANING MATERIALS • METHODS • SERVICE
Technical Representatives in Principal Cities of U.S. & Canada

Dyeing: Crocking," by H. E. Millson, W. H. Watkins, and G. L. Royer, of this company, which has been printed as Calco Technical Bulletin No. 780. The results of studies made of the relation between the intensity of the crock and incomplete scouring, the presence of dye solvents, hard water, drying, shearing, chlorination, Glauber's salt, temperature, pH and dye concentration are reported in this paper.

Wright-Austin Co., 315 West Woodbridge St., Detroit 26, Mich. A bulletin designated as No. 715, presents representative types of steam traps, separators and boiler trimmings from this company's complete line.

The Bristol Co., Waterbury, Conn. Bulletin No. C305, covering this company's new line of model C500 impulse-sequence time cycle controllers. The bulletin gives detailed information about the newly developed model C500 cycle controller for tire presses, plastic molds, and general process operations.

Taber Instrument Corp., 111-TI Goundry St., No. Tonawanda, N. Y. Wear-testing accessories bulletin describing and illustrating new, improved accessories and other standard supplies designed to step-up efficiency of abrasion-resistance analyses with the Taber Abraser.

The Dow Chemical Co., Midland, Mich. A technical data Dow plastics booklet entitled "Injection Molding of Saran."

General Electric Co., Schenectady, N. Y. Bulletin, GEA-4746, illustrates the application flexibility of the all-purpose SB-1 control- and transfer-switch. SB-1 switch is adapted for use on all low-voltage circuits for the control switching of machine tools, solenoids, motors, circuit breakers, and electronic apparatus, and for the transfer switching of meters and instruments.

The Duriron Co., Inc., Dayton 1, Ohio. Bulletin 617 gives complete details on Durco corrosion-resistant top lubricated plug valves made of Duriron or Durichlor. Another Duriron publication is illustrated Bulletin No. 1603 on heat exchangers for heating and cooling corrosive solutions.

Textile Machine Works, Reading, Pa. The 1946 statistical survey covering the full fashioned knitting industry in the United States, entitled "The Reading Full Fashioned Knitting Machine."

Universal Winding Co., Providence, R. I. Pamphlet, No. 63 in a series, entitled "Getting the Most from Winding," containing information on worn thread guides, handling swifts, lubrication, improvements in brake action, and mill personalities.

Apprentice-Training Service, U. S. Department of Labor, Washington 25, D. C. A 1947 enlarged edition of "National Apprenticeship Program," which contains an explanation of the operation and development of apprenticeship in American industry, a list of 110 basic trade classifications in which apprenticeship programs are established, the various occupations under each classification with the time required for training, as well as criteria and procedure for determining the apprenticeability of an occupation.

Electro Metallurgical Co., 30 East 42nd St., New York 17, N. Y. An illustrated booklet entitled "Stainless Steel Helps to Produce Fine Textiles," in which is described the qualities that have made stainless steel valuable metal for the textile industry. There are also sections on spinning and weaving, dyeing and finishing, and the manufacture of synthetic fibers.

Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill. Book No. 2010 is devoted to "industry's biggest little chain drive" for fractional horsepower drives, and has for its subject, "Pitch Silent Chain."

Dow Corning Corp., Midland, Mich. New silicone data sheet No. B-30-1 entitled "Specifications for Rewinding Motors with Silicone Insulations."

Alloy Steel Products Co., Linden, N. J. Aloyco catalog No. 47 featuring design and construction of Aloyco valves, compositions and descriptions of the wide range of alloys in which Aloyco valves are available, application data, and illustrations.

Pittsburgh Plate Glass Co., Dept. P., Columbia Chemical Division, Fifth and Bellefield Avenues, Pittsburgh 13, Pa. A special booklet on the multiple uses of Pittcide, which is composed essentially of a stabilized calcium hypochlorite and is an improved granular germicide and disinfectant. Individual application details explaining surface cleaning, method of applying, proper materials for applying and similar information are given.

Aralac, Inc., 632 West 125th St., New York 27, N. Y. A revised pamphlet on the chemical, physical and processing properties of Aralac and Aralac content fabrics.

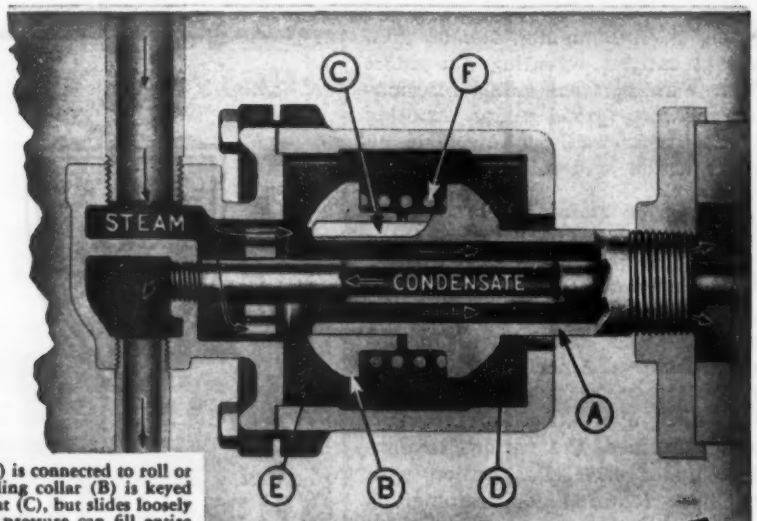
Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.



Nipple (A) is connected to roll or drum. Sliding collar (B) is keyed to nipple at (C), but slides loosely over it so pressure can fill entire housing. This pressure becomes the sealing force, by pressing seal ring (D) tightly against nipple. Both seal ring and bearing ring (E) are of special carbon-graphite, which eliminates oiling and packing. Spring (F) is for initial seating only. Type B Joint illustrated; other types, sizes for all needs.

...it's the biggest little trouble-saver in the mill...

In terms of physical size alone, the Johnson Joint could hardly be called big machinery. But in its ability to save time and trouble, and promote plant efficiency, its stature approaches anything the industry has ever seen.

The Johnson Joint was designed to go after the old stuffing box and steam fit troubles in a business-like way, and it literally knocks the stuffing out of them. There's no packing of any kind. There's no oiling required, ever. There's no adjusting — the higher the pressure, the tighter the seal. There's little to fear from misalignment—with provision for both lateral and angular movement built right in. Note besides how neatly it provides for more efficient syphon drainage, through the same head that admits the steam.

In dollars and cents, what does all this add up to? Well . . . enough at least to pay the cost of switching over to Johnson Joints in just a short while. Enough certainly to make the Johnson Joint too big to overlook.

Write for literature and the name of your nearby Johnson representative.

JOHNSON
Rotary Pressure
JOINTS

THE JOHNSON CORPORATION
815 WOOD STREET
THREE RIVERS, MICHIGAN

S. C. Johnson & Son, Inc., Racine, Wis. A new directory of textile converters and suppliers who offer fabrics finished with Johnson's Drax. It is a multi-color booklet entitled "A Who's Who in Fabrics."

Resinous Products & Chemical Co., Washington Square, Philadelphia 5, Pa. A booklet entitled "Paraplex G-25 and G-40" providing information on the properties of these non-migrating resinous polyesters and their use in such industrial applications as free films, extruded compounds, cable lacquers, fabric and paper coatings, etc.

Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Bulletin No. 885 entitled "Union Agreements in the Cotton-Textile Industry," as compiled by U. S. Department of Labor. The report is based on an analysis of 45 basic collective bargaining agreements which were in effect in 1945. Price, 20 cents.

Monsanto Chemical Co., 1700 S. Second St., St. Louis, Mo. The 27th edition of the book "Monsanto Chemicals and Plastics."

Allis-Chalmers Mfg. Co., Box 512, Milwaukee 1, Wis. Latest edition of the Allis-Chalmers Annual Review.

Mercontrol Inc., 278 Pearl Street, New York 7, N. Y. Bulletin describing the 5, 10, 15 and 20-ampere mercury switches developed by this company.

Link-Belt Company, Dryer Division, 300 W. Pershing Rd., Chicago 9, Ill. Book No. 2209 containing installation views, typical layouts, and dimensions of ten standard sizes of Multi-Louvre dryer/cooler units—a new design of dryer for materials requiring short treatment time and/or multiple drying temperatures.

Perry Metal Products Co., Inc., Sales Development Division, 1125 Atlantic Ave., Brooklyn 16, N. Y. Full-color Perry Parts Fact Sheet outlining diversified metal-working facilities and production methods available from this company.

Manzel Brothers Co., Buffalo, N. Y. Catalog 25-D describing this company's force feed lubricators, Model 25, for positive and automatic lubrication of cylinders and bearings. Catalog 40TS entitled "Manzel Chemical Feeders," designed for automatically feeding reagents into boiler feed water. Catalog 69, "Manzel Chemical Feeders," for injecting treating compounds into crude oil lines.

SUPPLIERS' NEWS

WHAT THEY ARE DOING

George E. Motz has been appointed sales representative for the Industrial division of Nopco Chemical Co., Harrison, N. J. For the past 14 months, Mr. Motz has been associated with this company at its Cedartown, Ga., plant. The territory to be covered by him includes Alabama, Mississippi, Louisiana, Western Tennessee and Arkansas, where he will service the accounts of both Nopco and its subsidiary, Metasap Chemical Co.

The Calco Chemical Division, American Cyanamid Co., has announced the assignment of Alden R. Loosli as assistant sales manager of the company's Rubber Chemicals department. Mr. Loosli has subsequently held supervisory positions in the various production departments of the company's Chemical and Intermediate division, and most recently was connected with the Intermediate Sales department.

Dr. H. B. Walker, formerly director of textile research for Rohm & Haas Co., Philadelphia, Pa., has been appointed assistant to Dr. R. H. Patch, vice-president in charge of operations, E. F. Houghton & Co., oil, leather and chemical manufacturers, Philadelphia.

Mr. Schrimshire

Roy W. Schrimshire is the new sales representative in West Georgia and Central and Southern Alabama, for the Henderson Foundry and Machine Co. division of the Southern States Equipment Corp., Hampton, Ga. Mr. Schrimshire formerly conducted his own mill supply business and at one time was associated with the Eagle & Phenix Mills.

Pittsburgh Plate Glass Co. has recently acquired the business of the Forbes Varnish Co., Cleveland, Ohio. The new unit will continue operation as the Forbes Finishes division of Pittsburgh Plate Glass Co.

Belton C. Plowden, manufacturers' sales agent, Griffin, Ga., has been appointed agent for Walker Mfg. Co., Philadelphia, Pa.

J. W. Davis, manufacturers' agent, P. O. Box 745, Columbus, Ga., now represents Smith Textile Apron Co., Gastonia, N. C., in the Georgia, Alabama, Mississippi, and Tennessee territories.

The board of directors of the Monsanto Chemical Co., Springfield, Mass., has announced the following election of officers: Dr. Charles Allen Thomas, St. Louis, Mo., former vice-president and technical director, is now executive vice-president; Felix N. Williams, Springfield, vice-president and general manager of the

THE SUCCESSFUL MILL MAN IS MOISTURE CONSCIOUS

In Textile SPINNING, WINDING, DOUBLING and TWISTING the lubrication imparted to the sliver, roving and finished yarn by the optimum moisture content, eliminates Breakages, Imperfections and Roughage.

Be sure at all times of proper Moisture Regain and Uniformity of Weights, Finishes and Quality by HYGROLITTING.

NOT ONLY ONCE BUT AT EACH OF THESE OPERATIONS

It's simple — It's inexpensive — It pays dividends

Ask for Free Illustrated Folder

"The Yarn Conditioning System for the Textile Industry of Tomorrow"

KEARNY MANUFACTURING CO., INC.

KEARNY, N. J. KMC GREENVILLE, S. C.

Montreal Mexico Sao Paulo Buenos Aires Antwerp

ONYX IONICS

Newsworthy items for textile technologists and production men

Volume 1 | July, 1947 | Number 4

One-Treatment Finish for Nylon Hose with Lasting Effects

Used in either paddle or rotary machines, without changes in operations or equipment, Eternalure D-15 provides a finish that lasts for the life of the hose.

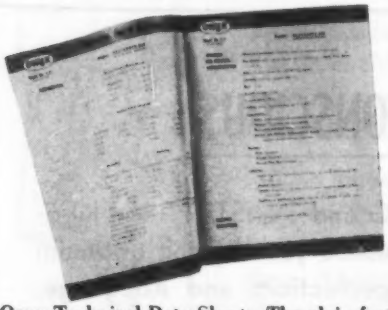
This water dispersion of a purely synthetic resin is noteworthy in the qualities it imparts to the hose and in the improvements it offers in finishing operations.

From the selling viewpoint it clarifies and tightens the stitch, improves the body and hand, while imparting exceptional snag resistance.

From the finisher's viewpoint, Eternalure D-15 not only simplifies the finishing operation, but greatly speeds the pairing of 15-20-30 denier hose after boarding because of the body it provides. All nylons can be handled with a minimum of pull threads when finished with Eternalure D-15. Troubles with hose sticking to forms are ended.

Onyx Technical Data Sheets

There comes a time in the process of investigating the adaptability of a material for textile finishing when facts without trimmings are wanted. That is the function of



Onyx Technical Data Sheets. The plain facts presented include chemical and physical characteristics, performance data, major production advantages and detailed information on applications.

More are in preparation, but at this writing, Onyx Technical Data Sheets are available for the following products:

Eternalure D-15	Repel-O-Tex D3 and D4
Phi-O-Sol WA	Neutronyx 330
Repel-O-Tex 115B Special	Dullatone CA
NSAE Paste	NCF Paste
Onyxsan LG	Stearo Glyceryl Sulfate N
Oroset L	Larvonil P
Imularv P and Imularv S	

Write for as many copies of each sheet as you can use.

Cationic Moth-Proofing

When you are looking for effective moth-proofing with durable resistance to both dry cleaning and laundering, it will pay you to get away from conventional proofing treatments and use Onyx Imularv P or Imularv S. These two cation-active quaternary ammonium compounds not only moth-proof wool and worsted goods, but they also impart bacteriostatic, bactericidal and fungicidal properties.

Imularv P is applied in water solution, usually in the pad. Imularv S is applied in organic solvent solution, usually in a spray. Both materials are completely stable and compatible with all but anionic surface-active materials.

NEW DEVELOPMENTS

For Further Details Write Onyx

Durable Crush Resistance for Rayon, Cotton and Rayon Mixtures is an outstanding function of Onyx NCF Paste. This urea formaldehyde condensation product makes possible a broad range of finish effects on any cellulose fabrics. No. 58

●

Have You Tried the Newest Onyxsan? Onyxsan LG is the latest addition to the Onyxsan series of cationic softeners. It deserves a trial because of its unusual resistance to washing and characteristically smooth, drapable, silky hands it imparts. No. 59

●

When You Want Fast Wetting and Penetration is the time to use Phi-O-Sol WA, one of the most effective wetting agents known today. It can be used with all types of dyeing, bleaching, printing and finishing agents with the exception of cation-active materials. No. 60

onyx

Onyx Oil & Chemical Company

JERSEY CITY 2, N. J.

CHICAGO • PROVIDENCE • CHARLOTTE • ATLANTA • LOS ANGELES

In Canada: Onyx Oil & Chemical Co., Ltd. Montreal, Toronto, St. Johns, Que.

For Export: Onyx International Jersey City 2, N. J.

company's Plastics division, was elected to the board of directors. Five additional vice-presidents are: Josiah B. Rutter, Everett, Mass., general manager of the Merrimac division; Dr. C. A. Hochwalt, Dayton, Ohio, director of the Central Research department; William W. Schneider, St. Louis, secretary of the company and head of the legal department; Daniel M. Sheehan, St. Louis, comptroller; C. A. Wolfe, St. Louis, director of purchases and traffic; and H. J. Heffernan, general manager of sales at the company's Merrimac division.

Mr. Reynolds

E. Hays Reynolds has been appointed sales-service man in the Greenville, S. C., territory, for The Keever Starch Co., Columbus, Ohio. Mr. Reynolds served in the infantry during the last war. Coincidental with this is the promotion of Charles G. Switzer as manager of the Keever textile sales division, Greenville.

Two sections have been newly formed to handle electronics engineering and electronics sales activities for the Buffalo divisions of the Westinghouse Electric Corp. The changes occur in connection with the transfer of the industrial control divisions from East Pittsburgh, Pa., to Buffalo, N. Y. E. H. Vedder was appointed manager of the electronic control engineering section and R. W. Staggs, manager of the electronic control sales section.

Major changes in the home office sales organization of General Electric Lamp Department have been announced. The department's Eastern and Western sales divisions have been discontinued in favor of the newly created general sales division and the sales operation division. Promotions in the lamp department include: N. H. Boynton, former general sales manager, who will join the administration division at Nela Park, Cleveland; P. D. Parker, former general sales manager of the eastern sales division, became general sales

manager of the general sales division in the new sales setup. Fred J. Borch, former manager of the general service division, is manager of the new sales operation division. D. A. Hopper, former manager of the Newark (N. J.) service district, will succeed Mr. Borch as manager of the general service division.

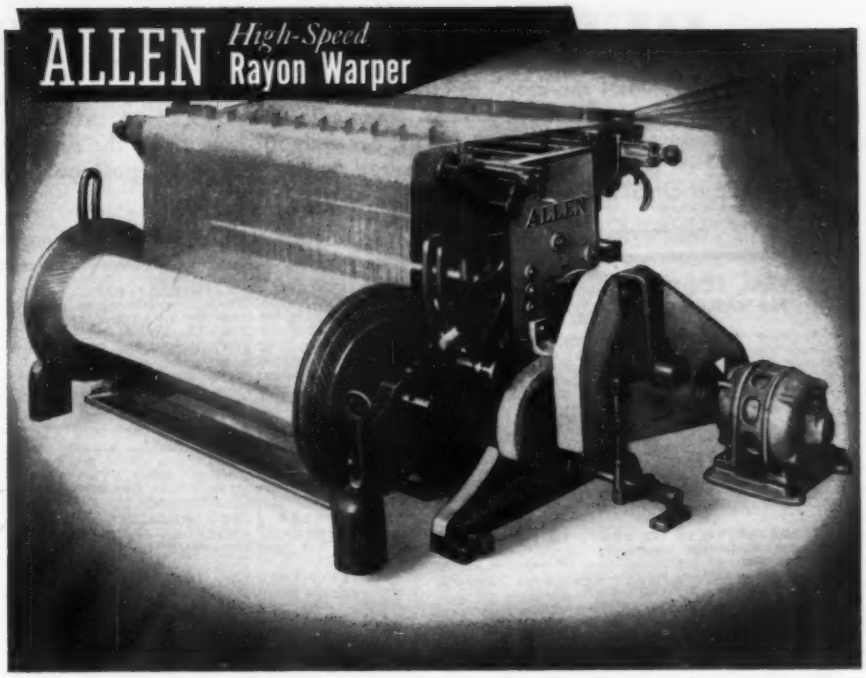
The Cameron Machine Co., Brooklyn, N. Y., has announced the retirement of W. B. Wilshusen, who has been president since the passing of the founder, James A. Cameron. Mr. Wilshusen will continue his association with the company as state representative in California, where he will make his home. Also announced is the election of H. C. Kinsey, former vice-president, to the presidency; A. Stirba, Sr., former works manager and director, to vice-president; and R. W. Cummings, former service manager, to secretary. Two new members who have been elected to the board of directors are Joseph Scheuermann, former sales manager, and Palmer J. Lathrop, former plant manager and assistant vice-president of Bristol-Myers Co.

Mr. Kirkpatrick

W. H. Kirkpatrick, formerly associated with Westvaco Chlorine Products, has been appointed manager of the new Greenville, S. C., sales office of E. F. Drew & Co., Inc., New York.

H. D. Foster, who has been eastern sales manager since 1941, has been named to the post of manager of Goodyear Tire & Rubber Co.'s mechanical goods divisions. He succeeds the late W. C. Winings. Sam DuPree, sales manager of Goodyear's molded goods plant, St. Marys, Ohio, has been transferred to Akron, Ohio, as assistant manager of the mechanical goods division.

George J. Stanley, director, vice-president and general sales manager for Aluminum Company of America, has retired as vice-president and general sales manager, but will continue as director of the company.



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Narrow Fabric Warpers

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Intermediate Dresser Stand for Woolen and Worsted Warp Yarns

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All types of Expansion, Warper, Beamer and Slasher Combs

Replacement parts for all types of Warping Equipment

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XXRXRHT Rayon Warper Beams for warping viscose rayon yarn of 50-1100 denier. Specially reinforced for this work. HC Warper Beams for acetate and Nylon. Extra heavy reinforcements to stand pressure of these yarns. Good warps are made on good beams.

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6. SERVING THE TEXTILE INDUSTRY—Illustrated booklet on services of textile and industrial consultants in assisting mill management.—WERNER TEXTILE CONSULTANTS, INC., New York 17, N. Y.

7. RAYON TELLS ITS STORY TO THE PUBLIC—Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, New York 1, N. Y.

8. WHAT DOES A FACTOR DO — Illustrated booklet with case histories.—MEINHARD GREEFF & CO., INC., New York 10, N. Y.

9. TESTING IN MODERN INDUSTRY—This booklet includes many useful tables, conversion factors, equivalent yarn sizes and other information helpful to textile mills. Also describes specialized testing servic. Available free to mill men on request.—UNITED STATES TESTING CO., Hoboken, New Jersey.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

107. FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. RIHCO TYPE B HUMIDIFIER HEADS—Bulletin describes new atomizers with construction lessening air consumption. — ALDRICH MACHINE WORKS, Greenwood, S. C.

115. ATOMIZER HUMIDIFIERS—Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

129. BAHNSON CENTRIFUGAL HUMIDIFIER—Bulletin 327 describes this completely self-contained industrial humidifier which requires only water feed and drain and electrical connection to install.—THE BAHNSON COMPANY, Winston-Salem, N. C.

132. ROOF, WALL AND FLOOR INSULATION—Illustrated booklets on uses of PC Foamglas Insulation and describing its waterproof, fireproof and permanent insulating properties. — PITTSBURGH CORNING CORP., Pittsburgh 22, Pa.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RADIO FREQUENCY HEATING — Applications dielectric heating, or twist-setting, cake-drying, dye package drying. — WESTINGHOUSE ELECTRIC CORP., Pittsburgh, Pa.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

155. GLASS BLOCKS—28-p. booklet with illustrations, engineering data, patterns PC glass blocks. —PITTSBURGH CORNING CORP., Pittsburgh 22, Pennsylvania.

156. ALL-OUT DRY CHEMICAL EXTINGUISHER—Describes this new chemical extinguisher which contains a special powder injected by gas pressure which is an effective means of controlling surface fires in textile fibers.—ALL-OUT MANUFACTURING CORP., New York 16, N. Y.

158. SHIPPER'S HANDY HELPER — A helpful booklet for the shipping room with taping charts, weights and measures, and illustrating a complete line of stencil machines and shipping room supplies. — DIAGRAPH - BRADLEY STENCIL MACHINE CORP., St. Louis, Mo.

159. BAHNSON HUMIDUCT SYSTEM — Bulletin 330 describes this unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering, and dehumidifying in any desired combination. —THE BAHNSON CO., Winston-Salem, N. C.

160. INSTALLING MACHINERY WITHOUT LAG SCREWS OR BOLTS—Booklet describing use of UNISORB pads for anchoring all types of machinery. —THE FELTERS COMPANY, Boston, Mass.

161. ALL-OUT'S EXTINGUISHING ACTION—Describes fire extinguishing action that is such that operators can approach fire without hindrance by extreme radiant heat. The extinguishing material remains on heated surfaces preventing reflash.—ALL-OUT MANUFACTURING CORP., New York 16, N. Y.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs, as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describing All-Purpose Floor Machines.—THE SELIG COMPANY, Atlanta, Ga.

165. SELF-LOCKING NUTS — Illustrated folder lists complete dimensions of standard hex nuts available in sizes from No. 4 machine screw to 1¼" S.A.E. and U.S.S. and describes the outstanding features of ESNA Elastic Stop Nuts.—ELASTIC STOP NUT CORP. OF AMERICA, Union, New Jersey.

166. OAKITE PLANT MAINTENANCE DIGEST—A 16-page manual describing materials and methods for handling 54 recurring maintenance cleaning and related tasks in factories and mills. — OAKITE PRODUCTS, INC., New York 6, N. Y.

167. DU PONT COLOR CONDITIONING FOR INDUSTRY—Booklet, color used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale. — E. I. DU PONT DE NEMOURS & CO. (Inc.), FINISHES DIVISION, Wilmington, Delaware.

168. DIAMOND VULCANIZED FIBRE HOLLOW WARE—Catalog HW-11 describing and illustrating boxes, trucks, cans, barrels, baskets, and trays made of Diamond Fibre for use in textile mills.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

169. VACUUM CLEANING IN TEXTILE MILLS—Circulars and action pictures of Tornado Portable Industrial Vacuum Cleaners.—BREUER ELECTRIC MFG. CO., 5084 N. Ravenswood Ave., Chicago 40, Ill.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

210. GOODYEAR MECHANICAL RUBBER GOODS CATALOG—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill.—GOODYEAR TIRE & RUBBER CO., Akron, Ohio.

211. JOHNSON BRONZE CATALOGUE NO. 460—Shows over 850 sizes of cast bronze bushings, 350 sizes of UNIVERSAL Bronze Bars and over 250 Electric Motor Bearings. — JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILE ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

216. LEATHER BOOKLET NO. 202 — Attractive booklet illustrating and describing BONDARON Special Tanner Leather as used in various forms such as Check Straps, Solid Bound Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

225. BRONZE BEARINGS—64 page catalog of standard sizes of textile and industrial bearings, graphited oil-less bearings, bronze bars, babbitt metals.—THE BUNTING BRASS AND BRONZE CO., Toledo, Ohio.

230. PRINCIPLES OF TEXTILE MILL LUBRICATION—Booklet giving specific lubrication problems and data on practical textile operation, including advice on uses of various oils and greases.—TIDE WATER ASSOCIATED OIL CO., New York, New York.

231. V-BELT ENGINEERING DATA BOOK—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. — MANHATTAN RUBBER MANUFACTURING DIV. of Raybestos-Manhattan, Inc., Passaic, N. J.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pennsylvania.

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237. FAFNIR BALL BEARINGS FOR THE TEXTILE INDUSTRY—Outlining the application and advantages of ball bearings on textile machinery.—FAFNIR BEARING CO., New Britain, Conn.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

246. CUTTING OPERATING COSTS—Nationwide Illustrated Survey showing how American textile mills cut operating costs with Multiple V-Belt Drives.—GATES RUBBER CO., Denver, Colorado.

251. GILMER BELTS FOR THE TEXTILE INDUSTRY—40 page booklet on belting and drives for all textiles. Includes engineering information, tables, formulas.—I. H. GILMER CO., Tacony, Philadelphia, Pa.

258. VARIABLE SPEED CONTROL UNITS—Complete information on Reeves Variable Speed, including Transmission, Vari-speed motor pulley and Motordrive. Includes examples, illustrations, diagrams, engineering tables. Catalog G-435.—REEVES PULLEY COMPANY, Columbus, Ind.

263. NEEDLE ROLLER BEARINGS—Catalog Engineering and Application Data Edition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning, lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARINGS FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

268. THE LUBRIPLATE SERVICE HANDBOOK—Attractive 28-page illustrated book containing valuable information concerning the important subject of lubrication and setting forth complete recommendations of LUBRIPLATE lubricants for application to all types of machinery.—FISKE BROTHERS REFINING CO., Newark 5, New Jersey.

269. LUBRICATION AND MAINTENANCE OF BALL AND ROLLER BEARINGS—Illustrated bulletin describing efficiencies and economies of NON-FLUID OIL for all types ball and roller bearings.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

270. MANHATTAN FLEXLASTICS — Illustrated booklet describing how flexlastics are used in the Manhattan and Condor line of belting and mechanical rubber goods.—MANHATTAN RUBBER DIVISION, Passaic, N. J.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletins describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

272. ROUGHTON LUBRICATION CHART — Attractive chart listing lubrication recommendations for all mill departments and various textile machines.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

273. POWER TRANSMISSION CATALOG—"Off the shelf service" is a feature in this catalog describing speed reducers, gears, chain drives, belting, power and gravity conveyors, and many other nationally known lines distributed by PATRON TRANSMISSION CO., 120 Grand St., New York City.

274. MOCCASIN OIL DISTRIBUTING CARD CYLINDER BEARINGS—Illustrated folder describing a successful method for lubricating troublesome card cylinder bearings. Diagram shows suggested piping layout.—MOCCASIN BUSHING COMPANY, Chattanooga, Tenn.

275. GEM OILERS—Leaflet showing construction features, capacities, etc., of flexible spout welded steel oilers.—GEM MFG. CO., Pittsburgh, Pa.

INSTRUMENTS, STEAM SPECIALTIES . . .

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307. THERMOMETER AND PRESSURE GAUGES—Catalog 6705-R and 6706 give data on both circular and rectangular case pressure type thermometers for indiacting, recording and controlling processing operations in textile industry.—BROWN INSTRUMENT COMPANY, Philadelphia, Pennsylvania.

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421. AUTOMATIC WINDERS — Folder describing latest winding equipment with full automatic operation. Only one automatic head for up to 100 spindles.—ABBOTT MACHINE CO., Wilton, N. H.

422. MODERN TEXTILE ROLL COVERINGS—Illustrated booklet on roll covering problems with chart on correct usages. Also data on Acotex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

423. TEXTILE SHEET METAL PRODUCTS—Folder on cylinders, card screens, licker-in screens, repair work.—JENKINS METAL SHOPS, INC., Gastonia, North Carolina.

428. PNEUMATIC ROLL PICKER—Attractive bulletin descriptive of the "Amoskeag" roll picker that removes fly and lint from the top rolls and other drafting elements in spinning and roving frames.—M-B PRODUCTS, Detroit 26, Michigan.

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433. AUTOMATIC TRAVELING CLEANERS—Recent issue of Parks' Parables on automatic cleaners for spinning, warping, twisting.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

434. WINDING MACHINES—WORK LOAD CALCULATIONS—Reprints of series on winder operations from labor standpoint.—UNIVERSAL WINDING CO., Providence, R. I.

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441. SKF BALL BEARING TENSION PULLEY FOR SPINNING FRAMES — Attractive illustrated folder outlining the value of anti-friction bearing Tension Pulleys for all types of spinning frames.—SKF INDUSTRIES, INC., Philadelphia, Pa.

442. JOANNA ALUMINUM SPINDLE ADAPTER —Information regarding this new spindle adapter for straight or tapered type paper tube spinning from old spindles.—F. L. REGNERY CORP., Chicago, Illinois.

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WEAVING, SLASHING . . .

502. TEXTILE COUNTERS—Catalog T37 describing pick counters for looms, hank counters for spinning, yardage counters for cloth loom, etc.—VEEDER-ROOT, INC., Hartford, Conn.

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512. BRIGHT SPOT IN THE PRODUCTION PICTURE—Folder on more loom speed through Hunt loom spreaders.—MOUNTAIN CITY FOUNDRY & MACHINE COMPANY, Greenville, S. C.

513. SEYCO PENETRANTS FOR YARN CONDITIONING—Folder describing the scientifically formulated Seyco sizing. — SEYDEL-WOOLLEY & CO., Atlanta, Ga.

514. SLASHER HOODS — Pamphlet describing drip-proof slasher hoods for cotton or rayon slashers. Roof or sidewall exhaust.—WOLVERINE EQUIPMENT CO., Cambridge 42, Mass.

515. TEXTILE COUNTERS—Catalog No. 50 illustrating and describing complete line of Productimeter Loom Pick Counters; Hank Counters; Yardage, Electric and Predetermined Counters; Tachometers, etc. — DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

516. WEAVE ROOM ACCESSORIES—Weave room accessories catalog and literature on new plastic, bronze bearing sheave, which solves a troublesome weave room problem.—EMMONS LOOM HARNESS COMPANY, Laurence, Mass.

517. HUNT SPREADERS 1947 CATALOG—A complete catalog of Hunt Spreaders, textile equipment, and parts.—MOUNTAIN CITY FOUNDRY AND MACHINE CO., Greenville, S. C.

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519. WOODEN BEAM HEADS, WARPER BEAMS, AND WARPING MACHINERY FOR ALL FIBERS—62-page, illustrated booklet descriptive of and giving specifications for the Allen line of beam heads, warper beams, warping machinery, stop motions and cloth rolls.—ALLEN COMPANY, New Bedford, Mass.

520. STEP-UP WARP SIZING EFFICIENCY—Illustrated folder describing how Houghton field and laboratory research analyzes the sizing procedure.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

521. STEEL WARP BEAMS—20 page catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, Milton, Pa.

DYEING, FINISHING, CLOTH ROOM . . .

602. ALUMINUM IN THE CHEMICAL INDUSTRY—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. — ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

609. LIXATE PROCESS FOR MAKING BRINE—36-p. booklet includes installations in textile plants for regenerating water softeners; for dye exhausting agents.—INTERNATIONAL SALT CO., INC., Scranton, Pa.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrates descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding machines for hosiery.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

611. BRUSHING AND SHEARIN GMACHINES—Illustrated literature on the new Hermas Brushing Machine for use light sheeting to heavy ducks; also on Hermas AV Shears.—HERMAS MACHINE CO., Hawthorne, N. J.

613. RADIANT HEAT IN TEXTILE INDUSTRY —New illustrated book on uses radiant heat, data on fuel consumption, evaporation, etc.—RED-RAY MFG. CO., New York, N. Y.

614. STRIPS IN ROLLS—Form No. CF-942 illustrated folder showing over 25 slitters and roll winders for textile.—CAMERON MACHINE CO., Brooklyn, New York.

616. ENGINEERING PROPERTIES OF MONEL—Technical Bulletin T-5, giving detailed information on strength and ductility, working properties, resistances to various types of corrosion and other data on Monel Metal. — INTERNATIONAL NICKEL CO., INC., New York, N. Y.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describing the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation. — TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

618. THE DYEOMETER: AN INSTRUMENT FOR STUDYING COLOR REACTIONS—Technical Bulletin No. 792, describing the dyeometer, an instrument which makes possible the study of the dye liquor throughout the dyeing period. — CALCO CHEMICAL DIV., AMERICAN CYANAMID CO., Bound Brook, N. J.

619. 3 FOR 5—Illustrated folder describing features of Blickman stainless steel Dyeboxes. — S. BLICKMAN, INC., Weehawken, New Jersey.

620. DYE HOUSE VENTILATION—Pamphlet describing stainless steel exhaust systems for piece dye kettles. Equipment for stock dye houses. Tempering supply air units and controls.—WOLVERINE EQUIPMENT CO., Cambridge 42, Mass.

621. INFRA-RED RADIANT HEAT GENERATORS—Illustrated bulletins on infra-red technology and applications throughout Textile pre-drying, drying, polymerizing, printing, and other heat-processing operations. — CARBOMATIC CORPORATION, New York, N. Y.

622. FILT-R-STIL—Attractive illustrated booklet describing the FILT-R-STIL method of chemically purifying water.—AMERICAN CYANAMID & CHEMICAL CORP., New York 20, N. Y.

623. TENSION CONTROLS—Form No. C. F. 440 illustrating various types of unwind stands for use in maintaining constant tension on web. Some equipped with photo-electric side register controls.—CAMERON MACHINE CO., Brooklyn 2, N. Y.

624. LIXATE ROCK SALT DISSOLVER—Illustrated booklet describing why the lixate rock salt dissolver slashes costs of regenerating zeolite water softeners. — INTERNATIONAL SALT CO., INC., Scranton, Pa.

625. BALL BEARING ROLLER TYPE SCRAY—Circular No. 904 describing this scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

626. CONICAL OPENER—Circular 773 which describes this new opener which not only keeps the cloth open to full width, but also guides it, and is now fitted with rubber rolls and oilless replaceable bushings. Machine is used in continuous machines, piece dye kettles and in other places where it is desired to keep cloth open to full width.—BIRCH BROS., INC., Somerville, Mass.

627. SEVEN TANK BALL BEARING CRABBING MACHINE — Circular 900 describing this machine which has the pressure applied to the Squeeze Rolls by Air Cylinders and the drive of each pair of Nip Rolls is by individual motors synchronized to keep uniform tension throughout the machine. — BIRCH BROS., INC., Somerville, Mass.

628. CONTINUOUS CRABBING MACHINE WITH BALL BEARINGS—Circular No. 970 descriptive of this continuous crabbing machine with ball bearings and pressure applied by air cylinders, but the last Nip is a heavy Nip for extracting purposes.—BIRCH BROS., INC., Somerville, Mass.

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DYESTUFFS, CHEMICALS, SOAPS . . .

704. THE TEXTILE APPLICATION OF METASOL (CALGON)—Handbook with detail information covering the use of Metasol in Scouring, Bleaching, Dyeing and Finishing.—BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 28-page booklet outlining methods of silk-soaking and outlining investigations on the soaking, back-winding and degumming of silk.—HART PRODUCTS CORP., New York City.

710. THE MAPRO SERIES—34 page book describing the use of detergents in general textile mill work. ONYX OIL & CHEMICAL CO., Jersey City, New Jersey.

712. STANDARD SILICATE ALKALIES—Booklet on silicate of soda for kier boiling, bleaching, water treatment, etc., giving tables for specific gravity temperature correction, tank capacity. — STANDARD SILICATE DIV., Diamond Alkali Co., Pittsburgh, Pennsylvania.

713. LIOVATINE ED—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, New York City.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletins on Aquarol, water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

717. FINISH KB—Finishing compound designed as binder in combination with filling and stiffening compounds. Avoids dusting, insures draping qualities.—SANDOZ CHEMICAL WORKS, New York City.

719. MERCERIZING AND ALKAMERCE—10-page booklet on methods of mercerizing, caustic recovery, important facts in mercerizing, etc.—HART PRODUCTS CORP., New York, N. Y.

726. WETSIT—Leaflet describing Wetsit, a synthetic aromatic compound with excellent surface tension reducing properties; gives rapid wetting out and thorough penetration; available in three strengths.—JACQUES WOLF & CO., Passaic, N. J.

727. THE ONYXSANS—24 page book describing the application of cation active permanent softeners in textile processing and finishing plants.—ONYX OIL & CHEMICAL CO., 15 Exchange Place, Jersey City 2, N. J.

731. WET PROCESSING AGENTS FOR EVERY TEXTILE APPLICATION—Folder listing processing agents for hosiery and underwear, yarns and piece goods, woolens, etc.—BURKART-SCHIER CHEMICAL COMPANY, Chattanooga, Tenn.

732. A NEW FINISHING OIL—Folder on Warco 945-A finishing agent where softness is desired.—WARWICK CHEMICAL CO., West Warwick, R. I.

736. MONOPOLE OIL—Bulletin describing use for bleaching, boil-offs, dyeing, kier boiling, mercerizing, sizing and finishing.—JACQUES WOLF & CO., Passaic, N. J.

738. LEVELENE—Booklet describing use of Levelene for leveling vat and direct colors. Also for stripping down vat colors.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

740. MONSANTO CHEMICALS—212 page illustrated buyers guide for users chemicals including useful tables, chemical information.—MONSANTO CHEMICAL COMPANY, St. Louis, Mo.

743. HOOKER ELECTROCHEMICAL GENERAL PRODUCTS LIST—Bulletin 100, listing approximately 100 chemicals, including 15 new products, giving descriptions and characteristics of each chemical and its uses.—HOOKER ELECTROCHEMICAL COMPANY, 14 Forty-seventh St., Niagara Falls, New York.

746. CORABIL RT—Technical bulletin on Drew Tested Synthetic Softener, Plasticizer, other agents for Rayon crepe soaking, warp sizing.—E. F. DREW & CO., Boonton, N. J.

747. NAPTHOLE TK—Technical bulletin on Drew Tested Products for Kier Boiling Cotton, Washing Cotton Knit Goods.—E. F. DREW & CO., Boonton, N. J.

749. TWENTY-FIVE YEARS OF TEXTILE RESIN FINISHING—Attractive bulletin concisely reviewing the history of resin finishes with brief descriptions of basic applications made in the past, present development, and future probable types and uses for textile resins.—AMERICAN CYANAMID CO., TEXTILE RESIN DEPARTMENT, Bound Brook, New Jersey.

749. LUPOMIN G—Pamphlet outlines the application of the quaternary ammonium compound recommended for treating natural and synthetic fibres to give soft hand, lubrication, odorless finish, brighter shades, etc.—JACQUES WOLF & CO., Passaic, N. J.

750. TEXTILE PRINTING—Folder on textile printing thickeners for vat, azoic, chrome colors, fast blacks, white discharge, resist, and pliose applications.—NATIONAL STARCH PRODUCTS, INC., New York 16, N. Y.

752. CAUSTIC SODA BOOK—Elaborate 72-page text containing useful graphs, charts, diagrams and descriptive photographs designed for use of the technical men, buyers, executives, operating officials and engineers in textile mills.—COLUMBIA CHEMICAL DIVISION, PITTSBURGH PLATE GLASS CO., Pittsburgh 13, Pa.

754. THE ION EXCHANGE PRINCIPLE AND ITS APPLICATIONS—8-page illustrated folder illustrating the manner in which ionac and ion exchange materials are applicable to the textile field.—AMERICAN CYANAMID COMPANY, New York 20, New York.

755. LUPOMIN—Leaflet outlines the advantages of the cation active softener which is suitable for use on cotton, linen, silk, wool, synthetic fibres and mixed fabrics. A small percentage of lupomin gives a supple, smooth hand.—JACQUES WOLF & CO., Passaic, New Jersey.

756. POPULAR INDUSTRIAL CHEMISTRY—This informative booklet will be of interest to all textile chemists, dyers and finishers.—KALI MFG. CO., Philadelphia, Pa.

758. CEGLIN—Attractive illustrated booklet describing the application of ceglin (cellulose ether) to many types of fabrics. — SYLVANIA DIVISION, AMERICAN VISCOSE CORP., New York 17, N. Y.

759. SUPERCLEAR—Leaflet describes this scientific printing thickener which is an ideal thickener for printing all types of textile fibres and fabrics. Noted for its extreme purity, complete solubility and exceptional penetrating properties.—JACQUES WOLF & CO., Passaic, N. J.

760. CERFAK—Booklet describing this unusual surface-active chemical possessing both high detergent and high wetting-out properties. — E. F. HOUGHTON AND CO., Philadelphia, Penna.

761. CHEMICALS FOR THE TEXTILE INDUSTRY—Attractive 30-page booklet describing uses and properties of a full line of textile chemicals.—ROHM & HAAS CO., Philadelphia, Pa.

762. WORSTED OILS—Illustrated folder describing the Sulfol oils that are used to properly lubricate all types of worsted and high grade woolen fibers.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

763. TRITON 770 FOR TEXTILE PROCESSING—12-page technical bulletin describing this efficient synthetic surface-active agent, with practical formulations for its application in all phases of textile wet processing.—ROHM & HAAS CO., Philadelphia, Pennsylvania.

764. GENERAL PRODUCTS LIST—20-page illustrated booklet providing complete information on Hooker chemicals and outlining the specialized Hooker processes.—HOOKER ELECTROCHEMICAL COMPANY, Niagara Falls, N. Y.

765. HOSIERY FINISHES AND FORMULAS—Attractive new booklet describes the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

KNITTING . . .

801. THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

803. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste. H. W. BUTTERWORTH & SONS CO., York and Cedar Sts., Philadelphia, Pa.

809. TEXACO IN THE KNITTING INDUSTRY—Folder on knitting mill lubrication.—THE TEXAS CO., 135 E. 42nd St., New York, N. Y.

813. THE NEW REINER HIGH SPEED TRICOT MACHINE—168" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance. — ROBERT REINER, INC., Weehawken, N. J.

814. MODERN CIRCULAR KNITTING MACHINTRY—Circular on request from the WILDMAN MFG. CO., Norristown, Penna.

815. KNITTING MACHINE OPERATOR'S MANUAL—For fixers and operators, a new book which describes the functions, installation, servicing, and adjustment of Supreme Knitting Machine Model MJ. Contains yarns and trouble chart.—SUPREME KNITTING MACHINE CO., INC., Brooklyn, N. Y.

816. THE NEW REINER KAYLOOM—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine. — ROBERT REINER, INC., Weehawken, N. J.

817. PARTS CATALOG—MODEL MJ KNITTING MACHINE—30-page book giving name, number, and photograph of all parts in Supreme Knitting Machine Model MJ. New CYLINDER CHART also available on request.—SUPREME KNITTING MACHINE CO., INC., Brooklyn, N. Y.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION—Catalog 45-A describing Light Metal Tricot Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, Milton, Pa.

822. GATES LOOM ACCESSORIES—Catalogs MRG-418, MRG-421, MRG-423 describe the advantages of lug straps, harness straps and drop box pickers made from a remarkable new material called Tex-Hide. Catalog MRG-419 describes the advantages of a new "Tractive-Rib" take-up roll covering.

SEWING MACHINES . . .

909. "SUPERLOCK" OVERSEAMING MACHINE—Bulletin No. 823, describing the outstanding machine for overseaming, overedging, hemming and serging on a wide variety of fabrics.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

910. SPLIT TUBING MACHINE—Bulletin No. 811, describing improved model Style 950-CDD2 for attaching split tubing to athletic shorts, lingerie, undergarments, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY—Profusely illustrated. Gives clear concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits. — CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use. —MEESE, INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial application.—Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1006. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsi, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT—56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1015. MATHEWS ROLLER CONVEYORS—Illustrated booklet showing typical installations material handling with roller conveyors.—MATHEWS CONVEYER CO., Ellwood City, Pa.

1019. CONVEYORS BY STANDARD—Catalog C-126 for ready reference on materials handling.—STANDARD CONVEYOR CO., North St. Paul, Minnesota.

1020. BALING—Illustrated folder on strapping textile boxes to ship as bales.—ACME STEEL CO., Chicago, Ill.

1022. CLEVELAND TRAMRAIL ENGINEERING AND APPLICATION DATA—Illustrated booklet with many photographs and sketches. Packed with valuable data. Covers briefly the various types of Cleveland Tramrail equipment. Delves into engineering details.—CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1023. DEVELOPMENT OF MONORAIL CRANES—An 8-page reprint of special article describing and illustrating the development of monorail type cranes to meet the various overhead handling problems.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1024. ZIP-LIFT ELECTRIC HOISTS—Illustrated booklet describing the 500, 1000, and 2000 pound capacity hoists. Contains the construction features, clearance date, condensed specifications, and a partial list of the many large users.—HARNISCHFEGER CORP., Milwaukee 14, Wis.

1025. CAB-OPERATED AND FLOOR-OPERATED ELECTRIC HOISTS—Bulletin No. 127 describing and illustrating electric hoists of various types and capacities. — SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1026. HEVI-LIFT ELECTRIC HOISTS—Illustrated booklet describing the application of hoists ranging in capacity up to 15 tons in the textile industry. Gives suggested applications, detailed features and the 5-step variable speed full magnetic push-button control and seven types of mounting.—HARNISCHFEGER CORPORATION, Milwaukee 14, Wis.

1027. SINGLE BEAM CRANES—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling cranes.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1028. TRAV-LIFT CRANES—Bulletin H13-1 describing P & H overhead traveling crane service.—HARNISCHFEGER CORP., Milwaukee 14, Wis.

MISCELLANEOUS . . .

1102. REPAIR PARTS FOR TEXTILE MACHINTRY—86 page booklet and catalog on replacement parts for opening, picking, carding, spinning and twisting machinery.—HENDERSON FOUNDRY & MACHINE CO., Hampton, Ga.

1103. UNBRAKO SCREWS—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. HARD CHROMIUM PLATING SERVICE—Illustrated booklet on Walhard engineered plating for textile metallic parts.—WALTON & LONSBURY, Attleboro, Mass.

1105. MILL NOTES—This is a mimeographed six-page pamphlet published every month containing information on new developments in process, manufacturing and testing of interest to woolen and cotton mills. Mailed free to interested readers on request.—UNITED STATES TESTING CO., Hoboken, N. J.

1106. ILLUMINATED MAGNIFIER—A folder showing how Pike Flash-O-Lens is used in textile inspection; illustrated to show various models including the Pike Master Magnifier Set. — E. W. PIKE CO., Elizabeth 3, N. J.

TEXTILE INDUSTRIES, Grant Bldg., Atlanta, Ga.

Please send me, without obligation, free booklets described in the July 1947 issue of TEXTILE INDUSTRIES.

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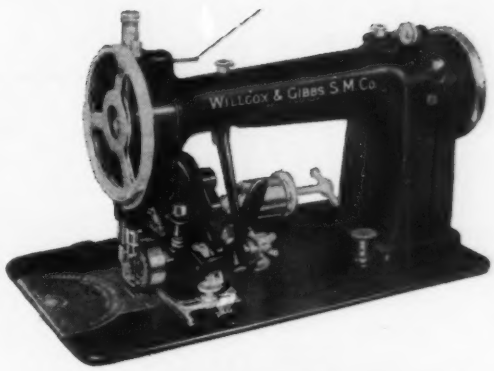
Do You Know That
although Elias Howe is honored as the original inventor of the Sewing Machine, Walter Hunt invented a machine with the same basic principles of the Howe device, approximately twelve years before Howe patented his machine.
Lacking in foresight, however, Hunt failed to patent his invention and therefore, did not reap the financial harvest gathered by Howe.
On the other hand, when James E. A. Gibbs appeared on the scene in 1857 with his first Single-thread Chainstitch, no sewing machine producing such a stitch had been invented nor had ever been heard of. Consequently, the Gibbs machine constituted the only undisputed original invention of that period.

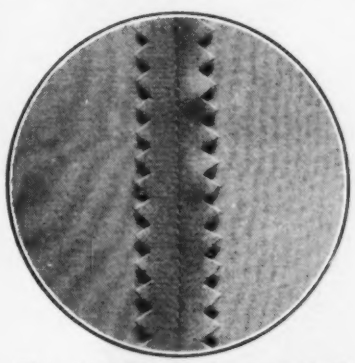
THE "W&G" PINKING AND SEAMING MACHINE

The *pinked* seam is the *modern* seam for *modern* garments. As produced on the "W. & G." Lockstitch Type 27, the pinked seam is attractive, durable and economical. It is neater because it lays flat without bulk.

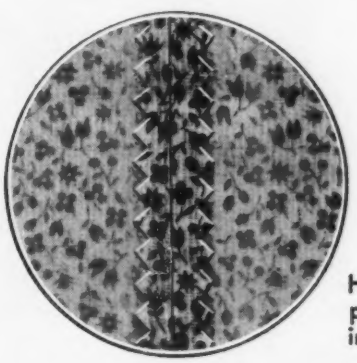
The "W. & G." Lockstitch Type 27 not only offers manufacturers a medium for quality production of unique and modern pinked seams, but its possibilities can be greatly enlarged upon by a special finger lever means incorporated in the machine.

By a mere flick of the finger lever the machine is instantly converted into a plain stitcher and can be used for countless straight sewing operations.





The pinked seam is particularly effective on slips, silk and rayon undergarments, etc.



House dresses are greatly improved in appearance and wearing qualities by the use of pinked seams.

Bulkiness, pressing marks and shine are virtually eliminated on men's clothing with pinked seams.

Send for Illustrated Descriptive Bulletin No. 775

WILLCOX & GIBBS SEWING MACHINE CO.
214 West 39th Street, New York 18, N. Y.

Famous Firsts

THE FIRST CASH REGISTER made in this country was invented by James J. Ritty, a Dayton, Ohio, businessman, in 1879. He conceived the idea while observing, on a trip to Europe, the operation of a recording device, used by the ship's officers, which indicated the speed of the engines by marking the revolutions of the propeller. His first machine was inaccurate, but by 1880 he had developed a new register that proved to be practical.

THE FIRST KNITTING MACHINE to produce complete ribbed top half-hose and slack sox with single and multiple wrap patterning plus color-in-color effects was the S&W HH-PW Color-in-Color Machine. Developed in 1940, this machine is a remarkable time and labor saver as well as a great business getter. It is one of the numerous S&W "famous firsts" that are helping knitting mills throughout the country to increase the quality and variety of their lines.

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Hosiery Trays Increase Efficiency

System for use of trays and routing cards is described. Continuous inventory of goods in process and reduction in pulled threads are advantages claimed.

By H. T. SUMNER

Supt. Wisteria Hosiery Mills
Gastonia, N. C.

A KNOWLEDGE of what is going on at all times is one of the most important elements in the management of any mill. This is necessary in order that corrective action might be initiated quickly should such action be needed.

It is not easy to know just what is going on in a plant at all times. To accomplish this, it is usually necessary to exert extra effort. However, this extra effort, in almost every instance, pays dividends.

Extra effort is required to install a system for the use of hosiery trays in a mill, but the benefits to be gained from such a system more than offset the time, energy, and money expended.

Types of Trays Available

Hosiery trays of many types are on the market today and just as many different varieties are improvised by employees for use in their respective hosiery mills. There are plastic trays, aluminum trays, wooden trays, and canvas trays. These can be obtained in combinations and in all sizes and shapes.

The type of tray that we have adopted is the aluminum or steel rod tray covered with a good, smooth, heavy twill. This tray is light and pick-proof.

A recommended size for the tray is 44 inches long and 16 inches high. It is desirable to have an obstacle in the center of the tray, about five inches above the bottom. At first this will cause the pile of stockings in the tray to be high in the middle; however, the advantage of this is that due to the bulkiness of the foot and welt, this hump in the middle will cause the pile of stockings to be level when the tray is full.

An overhang of three inches on the open end of the tray will help the seamer to stack the welts neatly when she puts the stockings in the tray for the inspector. Of course, the tray should be equipped with straps or handles for carrying and also a pocket for the lot or production card.

This type of tray described weighs seven pounds and will hold 12 dozen stockings very nicely.

Procedure for Use of Trays

An empty tray is placed on top of the knitter's cabinet. When good stockings are removed from the machine, with a looper clip or the like, they are tied in a bundle and laid directly in the tray with the feet projecting out of the open end. Incidentally, by putting the stockings in the tray with the feet out, the heavy part of the stocking, the splicing and toe, is given a good opportunity to dry and also it prevents the stocking being wrinkled and hard to loop.

This bundle does not have to be tied neatly nor is it necessary that

Left, knitter places a bundle of hose into a tray. Right, operative carrying full trays to looper. Note that one end of the tray is closed and that stockings are placed in the trays with feet projecting from the open end.

it contain exactly 24 stockings. It is tied in this manner only to help the looper. She can pick up the bundle without having odd stockings fall out.

When the knitter places a bundle in the tray, he records on the back of the production card (see accompanying illustration) the number of stockings that he added. After the knitter has worked eight hours, he fills in that portion of the production card for which he is responsible. If the knitter has made only 10 dozen and 6 stockings, he fills in the first knitter coupon at the bottom of the card and places it in the pay box. He also fills in the line applicable to him on the body of the production card (10½ doz. knitted by———), and leaves the tray there for the next knitter to finish out the 12 dozen.

After shifts have changed, the next knitter adds one dozen and six stockings. He, in turn, fills out the second knitter coupon and places it in the pay box. He also fills out the line on the body of the production card that is applicable to him (1½ doz. knitted by———). Then he gets a new tray.

The production card is then inserted in the pocket of the tray and placed in a designated place to be taken to the grey goods room.

In case one knitter starts a tray and fills it in one shift, he merely tears off both knitter coupons but fills out only one. He then starts on another tray and the procedure is the same as that previously described. The menders and seconds are handled in another manner, the description of which is not necessary in connection with the tray system.

The tray is carried to the looper and placed on a small stand on her left. These stands will hold two trays. The looper takes hose to be worked out of the full tray on her left, and after completing the operation, places each one into an empty tray on her right.

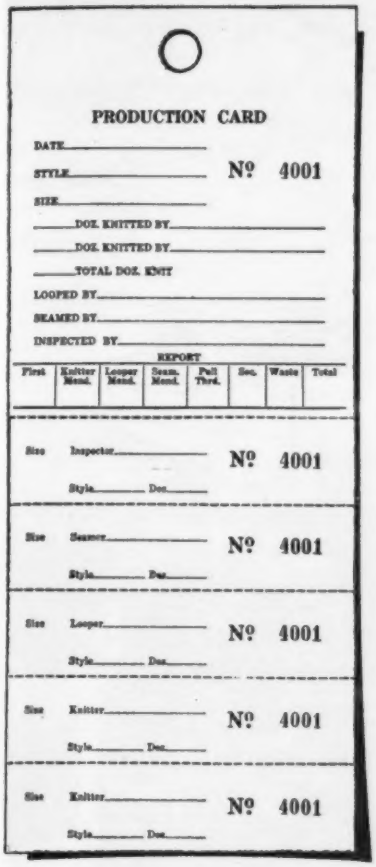
After she has completed a tray, she tears off the looper coupon (third from bottom) and fills in the blanks. The empty tray is put on her right and another full tray is brought and placed on the left side of the stand. At the end of the shift, the looper turns in her pay stubs to be credited to her for that day's work.

The looped tray is then taken over to the seamer. She works out of a full tray and into an empty one as the looper did. After she seams the work, it is not necessary for her to tie the stockings back up. She merely stacks up the work with the welt at the open end this time. The seamer handles the production card just as the looper did.

The tray of hose is ready for the inspector after leaving the seamer. The inspector works out of the tray directly on to the inspection form. The first grade stockings are tied up in bundles containing three dozen each before carrying them to pre-boarding bins.

When inspection of all hose in the tray is completed, the inspector fills in the fifth coupon and also the inspection report on the

Upper photo, operative removes stockings from tray preparatory to looping. Note that there are two trays on small stand to left of looper. Looper takes hose to be worked out of tray on her left and, after completing the looping operation, places hose in tray on her right. Lower photo, close-up of looper table and trays, showing arrangement.



PRODUCTION CARD

DATE_____

STYLE_____ Nº 4001

SIZE_____

_____DOZ. KNITTED BY_____

_____DOZ. KNITTED BY_____

_____TOTAL DOZ. KNIT

LOOPED BY_____

SEAMED BY_____

INSPECTED BY_____

REPORT

First	Knitter Mend.	Looper Mend.	Seam. Mend.	Full Thrd.	Sec.	Waste	Total

Size Inspector_____ Nº 4001

Style_____ Doz._____

Size Seamer_____ Nº 4001

Style_____ Doz._____

Size Looper_____ Nº 4001

Style_____ Doz._____

Size Knitter_____ Nº 4001

Style_____ Doz._____

Size Knitter_____ Nº 4001

Style_____ Doz._____

production card. The top of the production card is attached to a small strap of webbing which is divided into several sections, and these sections, which designate different types of irregularities and bad work, are the stockings which are thrown out by the inspector.

The strap is taken up by the "bad work" girl who routes this work to the proper place. Then the top part of the production card is turned into the office.

Advantages of the Card

This master card is used to check the pay stubs in order to assure every operator's getting the correct pay. It is also helpful in keeping the mill inventory since it is possible to know where each tray is at all times.

For example: When the looper ticket from Lot 4001 comes to the office, it is known that this tray has been looped and is ready for seaming. At the end of each day when the tickets are collected and recorded in the inventory book, the situation in every step from the knitting room through inspection is available at a glance.

Also, when the tops of the production cards are turned in at the end of the day by the grey goods room supervisor, the percentage of firsts and other classifications that came out of the work inspected on that day are given, thus presenting a clear picture of the operations for the day. As stated at the beginning, this system is not entirely free of trouble, but it is possible to know just how operating conditions are at the end of each day.

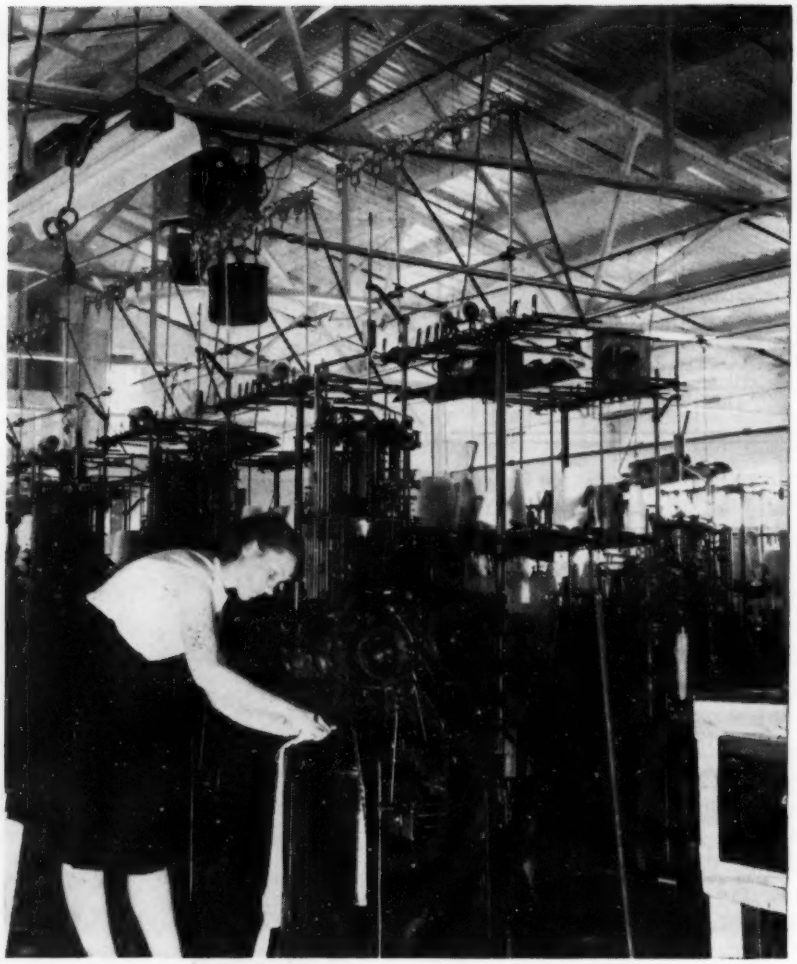
In addition to knowing what goes on each day, the tray system makes a considerable reduction in pulled threads. The stockings are handled in a tray and do not have to be carried around by hand. Consequently, pulled threads are reduced to a great extent.

The tray system is relatively inexpensive to install, and as shown, will pay for itself in a short while.

Above, seaming operation is being performed. Arrangement of trays is the same as that at the looper. It is not necessary to tie the stockings into bundles after this operation, so after the work is finished, stockings are placed in the tray with the welt at the open end. At right, an inspector works directly out of the tray on the rack onto the inspection form. Note full tray on floor ready for inspector.

ELECTRICAL

Stop Motions



The operator will get better results when machines are equipped with stop motions. Many press-offs can be prevented.

THE IDEA of equipping various types of circular machines with stop motions is, in some instances, as old as the machines themselves. Machine builders developed these devices to help increase the production of good work by preventing press-offs caused directly or indirectly by defective yarn, bad winding, or the lack of yarn.

Stop motions have been in use on hosiery ribbers, body machines for underwear production, and the like, for many years. They are generally known as yarn stop motions or mechanical stop motions, due to their being operated by trip levers, weights, springs, or a combination of all three.

In addition to yarn stop motions these same types of machines are also equipped with another stop motion; this one—also mechanically operated—stops the machine when holes are cut in the fabric, when bad or broken needles occur, needles become loaded, etc. Both of these devices reduce waste and seconds and help increase the production of good work, thereby decreasing manufacturing costs.

The so-called mechanical stop motions have served their purpose well, and many are still in use. Some require considerable attention to keep them in tiptop shape; others, once properly adjusted, stay put for long periods of time.

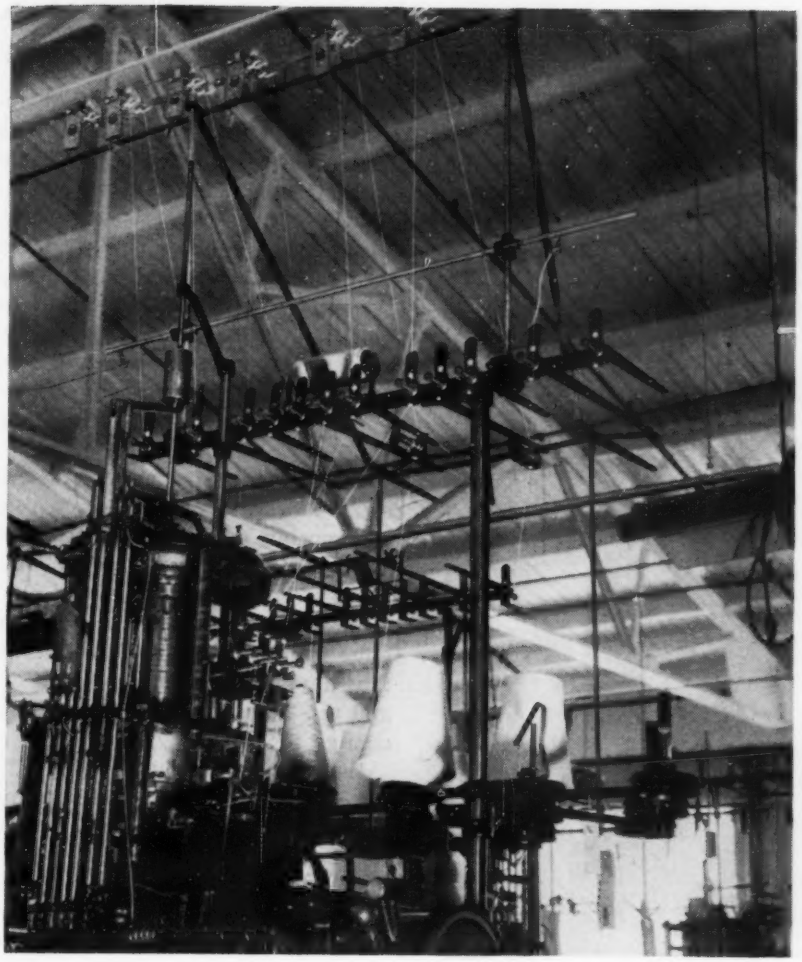
To be of any real value a yarn stop motion must first of all be dependable; it must stop machines in time to prevent a press-off when the direct cause of the press-off can be laid to the yarn or the lack of it. It has been said that a good operator will never permit a single cone to run off and cause a press-off. Well, we have seen very few good operators; the best will do well to prevent 95 per cent of the cones used in a day's run from running off. Today, such operators are scarce as hen's teeth.

By JOHN W. GILBERT

Preventing Press-Offs

Among the more common causes of press-offs are (1) cones running out, (2) under-winding, and (3) ends not tied. There are other causes, of course, but let's consider the three named. True, a good operator can prevent the bulk of press-offs caused by cones running out, but the best operator is absolutely helpless to prevent press-offs when yarns are under-wound or ends not tied.

Dependable stop motions will prevent all press-offs which might be caused by lack of yarn, under-winding, or ends not being tied—including yarns which are cut or damaged in transit or knots on the face of the cones, which prevent free delivery. Thus, a fair operator



Close-up of one type of stop motion in use on Komet.

will get better results when machines are equipped with dependable stop motions than a good operator will without them.

Every mechanically-operated stop motion we have seen and used was well worth its cost, but many were not dependable; they failed to function quite often when they were most needed. In this day and age, ways and means are found to improve many devices; stop motions have undergone many changes; many improvements have been made; and more are in the making now.

Electrical Stop Motions

Today, we see many electrically-controlled yarn stop motions. These are not new either; they have been in use on various types of machines for a number of years. What is new, however, is the fact that the electrically-controlled stop motions are finally being adapted to various types of hosiery machines. This change has been rather slow in coming, but there are numerous reasons why it had to come.

Today's excessively high costs of all kinds and types of knitting yarns make it necessary that every pound be converted into good work. High costs of new machines, needles, machine parts, and labor add fat to the fire. Press-offs on ribbers, for example, are costly; it takes time to pick them up and usually does some minor damages. On plain type hosiery machines, press-offs do little, if any, damage except make waste, but that waste is costly. If stop motions can prevent it then you need stop motions.

Many new types of knitting machines have been placed on the market, and many more are on the way. Many are becoming more complicated and will not stand the abuse that plain machines did. Take, for example, Komets and Komet Links and Links machines—press-offs on these machines, irrespective of their cause, give considerably more trouble and are more costly in every respect than press-offs on a plain hosiery ribber.

When yarns hit one dollar per pound and up, it makes little difference what kind of knitting machine is used, avoidable waste must be eliminated. As this is written, many Komets and Links and Links machines are giving better results with electrically-controlled stop motions, and we see no reason why these devices can not be used to very good advantage on other complicated hosiery machines as well.

Initial Installation Costs

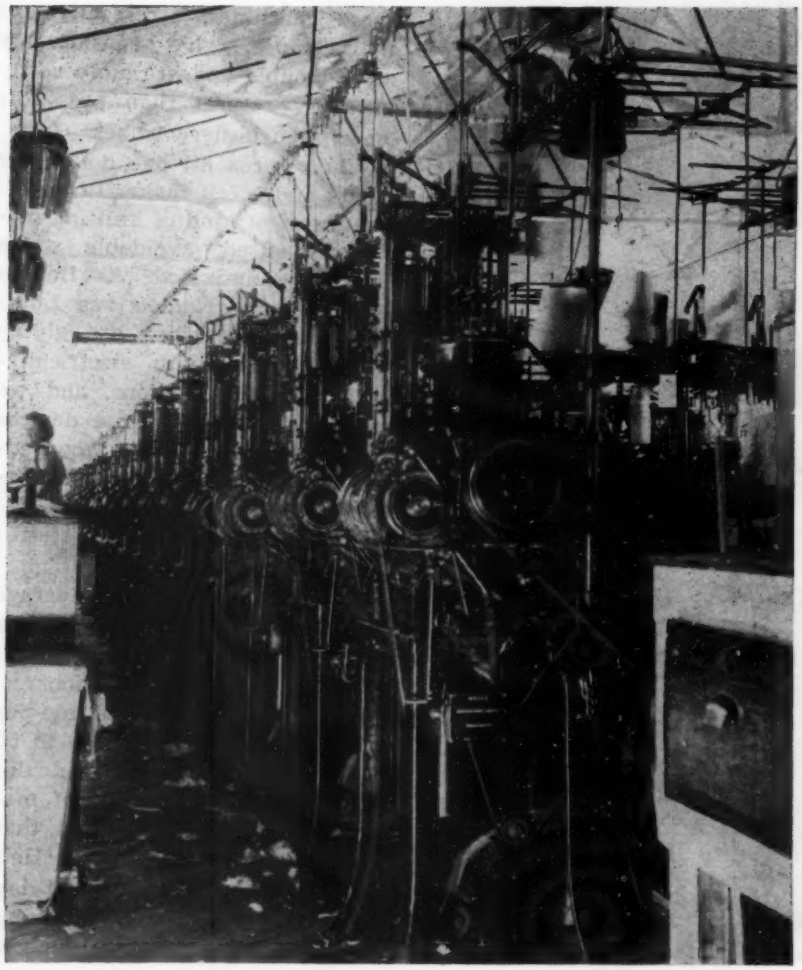
The first question the average mill manager will ask when you suggest installing electrically-controlled yarn stop motions is, "How much will they cost me per unit?" When he is told 50 to 60 dollars, he makes a quick calculation of the total number of machines he has and says, "Man, that adds up to a lot of money." He's perfectly right since present-day prices are high, but anything worthwhile is not cheap—never has been, for that matter.

The question the mill manager must answer is not "Can we afford to buy stop motions," but "Can we afford to operate our machines without them." The determining factor to be considered in answering this question is not the initial cost, but how much can be saved and whether or not these stop motions pay for themselves.

Savings Accomplished

The time required for an installation of yarn stop motions to pay for themselves will naturally depend on the type of machines on which they are used and the cost of yarns. To give stop motions credit for preventing press-offs only is just half of the story. They actually prevent needle breakage which is caused by press-offs, prevent waste, eliminate machine fixing which is caused by press-offs, prevent production losses from the same cause, and help to reduce seconds materially.

Thus, when a stop motion has actually saved a pound of mercerized cotton at $1.20 per pound or a



Stop motions are not complicated; can be applied in two hours.

pound of dyed wool at $2.50 per pound, it has done much more than take that pound of yarn out of the waste bin and put it into good production—it has eliminated all the troubles that go with making a pound of waste.

The best operator will find it difficult to watch four to six ends of yarn on each machine and take care of 10 to 12 machines, which means watching 40 to 72 cones of yarn to prevent press-offs alone. Stop motions will watch every end, day in and day out, and give the operator some much needed time to concentrate on other things.

It is not uncommon for one press-off on a Komet or Links and Links machine to make a two or three-hour fixing job for the machine fixer—nothing wrong with the machine, mind you, just some bad winding. The machine takes the abuse, the operator loses production, the cost of knitting goes up, and the mill pays the bill. This is especially true when making goods that use a single end per feed.

When the cone stops feeding, irrespective of the reason, a machine is down. If luck is with you and no damage is done, you still have a press-off to pick up and some waste to make before that machine starts producing once more.

When yarns run well, stop motions will help a lot; when yarns run badly, brother, that's when you begin to see how valuable they really are. We know from actual experience that electrically-controlled stop motions reduce waste and seconds anywhere from 10 to 30 per cent especially on ingrain numbers where the need is greater. We have some first-hand information from men who know. They say they would not attempt to run certain types of machines without stop motions. Yes, stop motions will pay for themselves and then pay additional dividends.

Reaction of Operators and Fixers

It is rather odd indeed that operators and fixers are not greatly impressed when a group of machines is first equipped with electrically-controlled stop motions. Their first reaction is, "well the mill is buying something to help it make more money and make us work harder." This is especially true during the tuning-up period when machines knock off for no apparent reason or fail to stop when they should.

Other operators and fixers will ask, "Are we going to have that contraption on our machines too? These things gives us the heebie jeebies. What are they good for? Land sakes, what next will we have to put up with?" But, wait a few days until things get settled, and the "Doubting Thomases" will change their tune.

Before you know it, you will have to draw straws to determine which machines come next, or you will be accused of favoritism. Both operators and fixers soon learn that stop motions are there for their benefit as well as that of the mill.

Watch your daily production records (which in most up-to-date mills are posted on the bulletin boards) and you will note a decided drop in waste and seconds and a definite gain of a few dozen per day in good work. Both your operators and fixers will begin to see the light and they will be sold on the stop motion. Results tell the story.

Improvements can still be made in these stop motions. On one type of electric stop motion we have seen we find one drawback. It will not stop the machine when large knots or slubs appear in the yarn. Frequently such knots, slubs and wads of lint will pass through the yarn guides but will not go through the holes in the yarn feed fingers. This causes seconds, waste and press-offs in spite of the stop motion device.

The old-time mechanical stop motions in use on ribbers will not permit large knots or slubs to pass through. Anything too large for the feed finger holes causes the stop motion to act the same as it

The Tests of Time...

. . . have proven that Aberfoyle Yarns—made by America's oldest mercerizers—assure beautiful, comfortable and serviceable knitted wear. Results of the "Tests of Time" are evident in every strand produced by Aberfoyle, truly a distinguished name in *Mercerized Cotton Yarns.*

ESTABLISHED 1883

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DURENE

AMERICA'S OLDEST MERCERIZERS

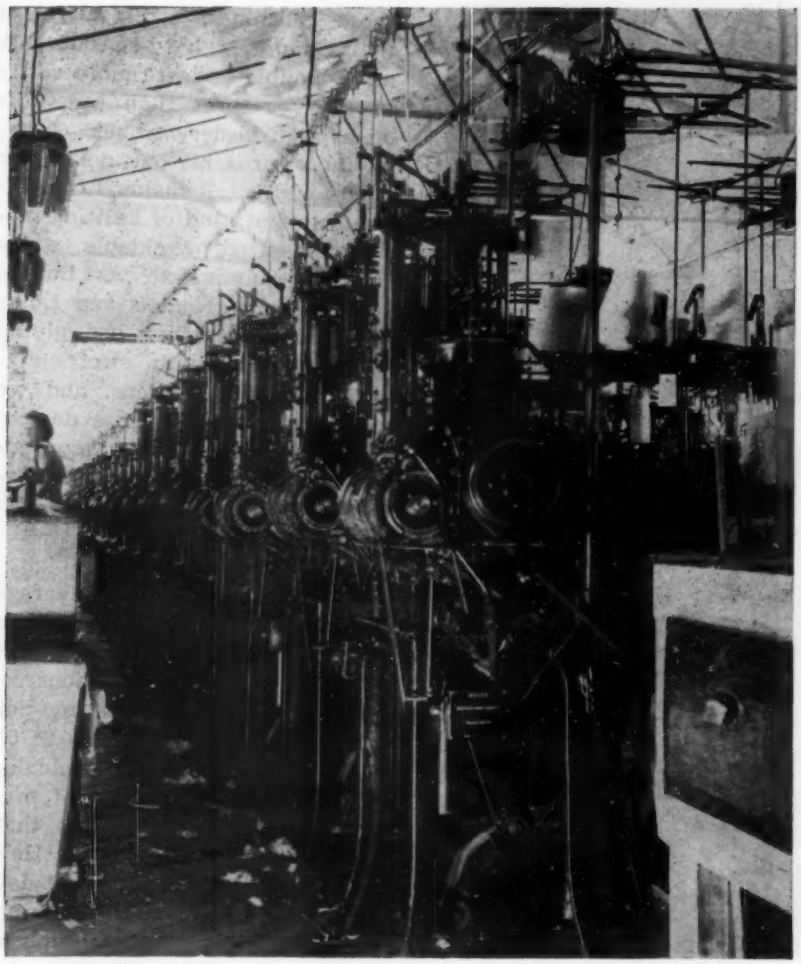
ABERFOYLE MANUFACTURING COMPANY
123 South Broad Street, Philadelphia 9, Pa.
—and, in the South
ABERFOYLE MANUFACTURING COMPANY
Belmont, North Carolina
Representatives in principal textile centers of the world

Made of Durene® multi-ply mercerized combed cotton yarn
4 WAYS BETTER than ordinary cotton yarns
EXTRA COMFORT —more absorbent
EXTRA STRENGTH —longer wear
EXTRA QUALITY —lasting lustre
EXTRA SERVICE —easy to wash
® Reg. U.S. Pat. Off.

NEOPHIL

MADE OF Weartwist YARN MERCERIZED COTTON

* Neophil, the Nylon Seaming and Looping Thread for Nylon Full-Fashioned Hosiery, made by the Premier Thread Co., Pawtucket, R. I.



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would for a run off.

Something probably will be done with electrically controlled stop motions which will give this added safeguard. Such an addition would make a good stop motion still better and more effective against *any* defect found in the yarn.

Large knots and slubs are not found to any extent in mercerized ply yarns but they frequently are found in singles cotton and wool. Rabbit hair and cotton mixtures, spun nylon and the like give off considerable loose lint which accumulates on the top of the cones and around yarn guides. Frequently such lint will adhere to the yarns while running and unless the stop motion acts when a wad of lint passes, the yarn will be broken when the wad hits the feed finger hole.

Easily Installed

These stop motions are not complicated, and they require very little attention once they are attached to the machines. They are sturdily built and simple to install; each stop motion is a complete unit for one machine supplied with individual electrical transformer and cord which is plugged into a convenient 110 volt AC outlet.

For Komet and Links & Links machines all units, upper and lower, are made to fit. Simply follow instructions which are furnished with the units. A complete unit can be applied in two hours or less by the average machine fixer and can be adjusted to suit the kind of yarn being run in a few minutes. Ample adjustment is provided for the trip lever and rod. All electrical connections and the magnetic knock off device are well made. The device does not require lubrication at any point. Each upper yarn guide is equipped with porcelain guides, a convenient back pull spring adjustment and a counterbalancing weight adjustment.

Costs Serve As Anchor to Prices

In the knitting trades and other textile lines that embrace (a) raw and semi-manufactured materials, (b) production of fabrics and finished garments, etc., and (c) the wholesale and retail distribution of the completed goods, the first four months of 1947 witnessed an intensive inquiry into costs all along the line. Owners and managements were alerted to meet the retailers' challenge of dire need for lower prices, to meet the demands of the public.

May and June retail sales figures have shown that the public actually had in reserve more buying power than the retailers knew of, so that in many cases, since middle of May, retail prices for worthwhile items have been increased. Over the last several weeks, retail promotions have had a good market, it is reported, and many merchants now seem to feel that, if they can feature better quality, they can raise the general price level at which the public will buy liberally.

Despite this unexpected upturn in retail distribution, however, manufacturers' study of their costs and experimentation with various schemes intended toward economies has continued. In a good many cases, it is related, the manufacturers find themselves confronted by cost items that presently are out of control. Either the Government (by reason mainly of Congressional action) or the labor unions seem for the present to have "stabilized" the important elements of manufacturing costs in this field. To a certain extent, this also helps to maintain a market for the end-products, observers admit.

Nevertheless, leaders in this field concede that while established "costs" now serve as an anchor to prices, economies in purchase of materials and short-cuts that can save on labor costs remain desirable. That is, while the time for retrenchment may have been lengthened it is felt by some that cost reductions still remain a main consideration for manufacturers.

It is pointed out that during first half of 1947 the delivery of new manufacturing equipment has placed a good many producers well along the way toward getting off better goods with a smaller payroll, as well as enabling some manufacturers to save through employment of lower-cost materials. In some cases, it is stated, the extra flexibility furnished by new machinery and improved handling of departmental functions will, in normal times, mean the difference between production at a profit and "break-even" operations over a period of months.

Thus far, installation of improved equipment, it is said, has afforded many mills more opportunity to diversify their production, so as to take advantage of quick changes in buyer preferences, which may be only temporary, but can be accommodated profitably with the new machines, while standard merchandise continues to be turned out for customers who never go in for novelties.

In the competition of "soft goods" versus "household durables" which long was forecast and now has become keener, it is related that knitters and other manufacturers who have provided themselves with modern tools, have a considerable advantage, because large distributors such as mail order houses and variety chains frequently find themselves balanced between featuring some merchandise items rather than others.

Going back to fundamentals, it is explained, mechanization is said by spokesmen for cotton farmers to be the main hope for reduction of their costs, as greater use of machines to harvest cotton may eventually yield economies that will, at least for a time, sustain our high prices for American cotton.

This explanation is traced step by step through the resulting processes through which the raw fiber is placed on the retail counter and cost of making and handling, it is added, becomes more important in each step. The idea is expressed that close attention to costs in endless detail is most likely to sustain the American standards in competition with rivals elsewhere in the world, during the later phases of postwar adjustment.

"But we were saving that money for our new baby."

John was having a bad time of it.

He was trying to explain things to the "little woman."

He simply had to have that new car. It was a necessity. He needed it to get to and from his job.

After all, he hadn't actually spent the money. It was really a matter of investment . . .

And so he went—on and on.

But the "little woman" just kept dabbing her eyes and blowing her nose and saying, "But we were saving that money for our new baby."

And she was right—

And John knew she was right.

•

A Manufacturer becomes a little casual in handling his Reserve for Depreciation. Instead of keeping that Cash Money in negotiable securities where it belongs, he lends it to the business for working Capital . . .

And when the time comes for him to invest that Reserve for Depreciation in New Machinery, to keep his plant in a good competitive position, the money is not available—

It's frozen!

•

An advertisement on "Good Housekeeping in Business," published by the makers of Reading Full-Fashioned Knitting Machines.

TEXTILE MACHINE WORKS
READING, PENNA.

Target for Flattery . . . Swift as an arrow in flight, sheer full-fashioned stockings go straight to a woman's heart. Flawless fabrics score a bulls-eye for the manufacturer, too. The high quality you desire is assured when you use TMW "Fixture Drawn"* Needles . . . fine needles made by a special TMW patented process which holds the needles straight and true. Let us put your needle bars in shape for faster, more accurate, more profitable knitting.

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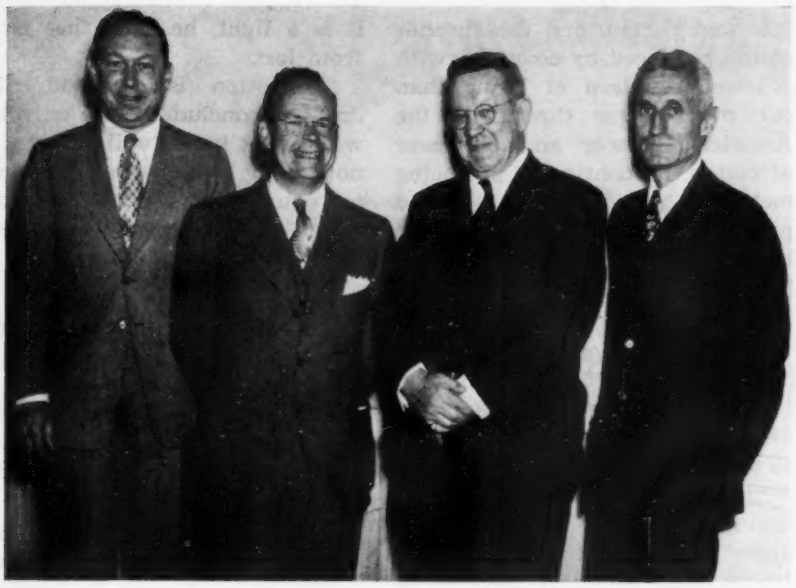
TEXTILE MACHINE WORKS • READING, PA.



New officers of the executive committee of the Underwear Institute. Shown here with Roy A. Cheney, president of the Institute, are J. L. Lesher, Bestok Underwear Co., Williamstown, Pa., vice-chairman; Lyndall F. Carter, William Carter Co., Needham Heights, Mass., chairman; Mr. Cheney and F. R. Devereux, Oneita Knitting Mills, Utica, N. Y., treasurer.

Manufacturing and Distribution Methods

Discussed by Underwear Institute

FEATURING a series of discussions on improved methods of manufacture and distribution to meet increased consumer demands, the first post-war annual meeting of the Underwear Institute was held on Thursday, June 5, in the Betsy Ross Room of the Benjamin Franklin Hotel, Philadelphia, Pa.

The problem of supply of raw materials for underwear manufacturers was discussed by experts in the various textile fields. Robert Jackson of the National Cotton Council, discussed cotton; Dr. William P. Jacobs, American Cotton Manufacturers Association, yarn and cloth; Edwin Wilkinson, National Association of Wool Manufacturers, wool; and Stanley Hunt, Textile Economics Bureau, rayon and nylon.

During the luncheon period, Dr. George W. Taylor, University of Pennsylvania and former chairman of the War Labor Board, addressed the group on "Labor."

Prospects and problems of reconversion for wholesale merchants, group distributors and retail department stores were outlined by Henry Matter of the National Wholesale Dry Goods Association, Dr. Harry Barth of W. T. Grant and Company, and Gordon K. Creighton of the National Retail Dry Goods Association.

Madeline Darling, lingerie and fabrics editor of *Vogue*, and O. E. Schoeffler, fashion editor of *Esquire* and *Apparel Art*, spoke on the effect of style and fashion in sales and merchandising. Their discussion was highlighted by the showing of a sound movie, "Where Do We Go from Here?"

The business of the Institute was first on the agenda. This included a message of welcome by Grover C. Good of Globe Knitting Works, report of President Roy A. Cheney, report of Treasurer F. R. Devereux, U. S. Army research and liaison by Earl Dunmore, infants' and children's measurements by S. P. Haight, and report of the nominating committee by Howard Collier, Griffin Knitting Mills.

Summary of President's Report

"American business will never return to the 'good old freedom' of the period from 1920 to 1933. Many governmental interferences and regulations will have to be observed by us all. We have marched so far along the road of government controls since 1933 that we can never fully retrace our steps," said Mr. Cheney.

"The American people in the past fourteen years have accepted a larger degree of governmental regulation than many would have believed possible. A new theory of the role of government has been developed—in which central government has become, and will in some measure remain, a far more intimate and direct factor in the life of every business and individual.

"New controls and regulations will come up from time to time, as the thoughts of our people and the complexion of government change. Informed business will not attempt to fight this tide of political and governmental thinking—but rather will be alert to see that new governmental controls are minimized and so shaped that in promulgation and administration they serve the best interest of the people as a whole. That which benefits all of us, benefits each of us to the greatest extent.

"If we are able to so shape the nature of future government regulation and control," Mr. Cheney predicted, "the next ten years will see the finest business we have ever known." He declared, "I am looking to the future not only with confidence, but actually with enthusiasm."

As a result of the Institute's efforts, Mr. Cheney said that the underwear industry met the demands of war production without the terrific over-expansion of plants which it experienced during the first World War—an over-expansion which was followed by a decade of sacrifices and liquidation of excess productive capacity. Today, he reported, the industry is just about on a balance between production and consumption.

As a result of the Institute's activities and research, Mr. Cheney said, the industry is able to assure the customer better underwear in the future. The results of two years' effort are about to be realized in the development of a new patented process known as the Redman Process, for the shrinking of knit fabric. A trusteeship was set up by the Institute to develop this process.

"I firmly believe that our efforts and money will bring to the industry a practical method of eliminating the shrinkage of underwear, which in my opinion will revolutionize the wearability of knit underwear and will provide a new product for the consumer. This in turn will give an impetus to the demand for knit underwear," said Mr. Cheney.

"The industry is also cooperating with the Bureau of Standards in adapting a new series of proposed basic body measurements covering infants and children—standards which arise out of results obtained by the Department of Agriculture which measured several thousand children to establish a basis for the sizing of apparel."

Further work, Mr. Cheney said, is being done in establishing basic body measurements for men and women, which will aid in revising present standard measurements.

Cotton

Plans of the cotton industry to meet domestic and foreign competition were outlined by Robert Jackson of the National Cotton Council in his address before the members of the Underwear Institute.

In his talk Mr. Jackson cited as chief competitors newly developed synthetic fibers, treated paper, jute and burlap, and the cheaper cotton produced by countries with a lower standard of living than our own. These threats to the American grower and processor of cotton, he continued, are being met and overcome by lowered production costs, more intensive research, better products and greater sales efforts.

"Cotton," Mr. Jackson said, "is inherently the most versatile, durable, adaptable fiber which man has ever known. Of all fibers, it is kindest to the human skin, easiest to wash, most comfortable to wear.

"It can be woven so tightly that the Army prefers it to all other fibers for the outer garments of troops in the arctic, yet its absorptive powers are so great that it is also preferred for the clothing of troops in the tropics."

Lower production costs for cotton, Mr. Jackson asserted, can be achieved through mechanization. At Stoneville, Mississippi, the largest experiment station of the National Cotton Council, it has been possible, he said, "to reduce the man hours necessary to produce and harvest an acre of cotton from 160 to 30. I am convinced," he continued, "that within the next few years we shall witness a revolution in cotton production methods."

Regarding the increased activity in American cotton research, Mr. Jackson said, "There is only one way to improve the quality of our cotton and of its products. That way is through research—research that starts with the breeding of seed that will produce a better, stronger, finer fiber and extending to shirts, sheets, underwear, and all the other products which cotton offers to consumers."

In sales effort, too, the cotton industry must increase its efforts, Mr. Jackson said. "At no time in its history," he asserted, "has cotton enjoyed the acceptance and prestige which are today accorded it in the field of fashionable merchandise. The record of the past few years clearly indicates that sales promotion can be just as effective on behalf of cotton as on behalf of any other product."

Through organized efforts, he continued, the cotton industry is preparing to fight for its markets. It is a fight, he said, that is far from lost.

"If cotton is defeated," Mr. Jackson concluded, "we ourselves will defeat it. We will defeat it by not giving it a chance to compete on equal terms with the fibers which seek to invade its markets."

Yarn and Cloth

America can't and won't talk itself into a recession as long as it adheres to a sound domestic economy, Dr. William P. Jacobs of the American Cotton Manufacturers Association told the members of the Underwear Institute.

But, he warned that disaster will result if the State Department carries through with its proposed charter for an International Trade Organization, and cotton and textile production is subsidized and promoted in foreign countries.

"If that is done," he said, "we will be in deep trouble. American farmers will lose their markets and American textile workers will lose their jobs to foreign workers, for neither American cotton nor American textiles can successfully meet low cost, subsidized world competition."

Such an International Trade Organization, Dr. Jacobs continued, is fortunately thus far only in the nebulous state, and he expressed the belief that it has little chance for success with American money.

"Even if other nations have no dollars with which to buy our products we can not build a permanent or profitable market by lending or giving them dollars. Even the United States is not wealthy enough to finance the world. But we do have money enough to prevent a domestic depression and that is exactly what we should do."

In the domestic field, he said, we are now in a period of change from the era of shortages and allocations to normal market conditions and adequate supply.

"While the day of easy orders and wild buying may be over," he said, "I believe the textile market should develop adequate confidence in a reasonable market based upon more normal circumstances.

"In the future we may have to

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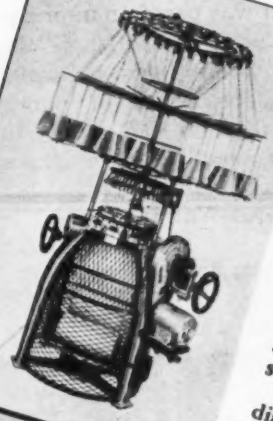


MODEL MJ • Knits Jersey at 100 Yds. Per Hr.

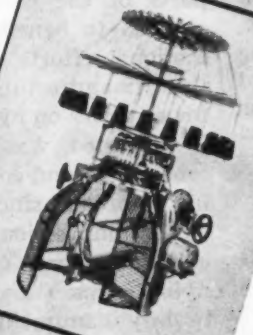
With the Body Size Model MJ the planned body size of the garment comes right off the machine.

This high-production, multiple feed machine turns out a variety of jersey fabrics in either solid colors or a wide range of horizontal stripes. Knits cotton yarn from 8/1 to 36/1 or their equivalents in wool, rayon and silk. New, infallible Micromatic Stitch control assures precision stitch uniformity.

The Model MJ is available in all diameter sizes from 8" to 30", with corresponding maximum number of feeds.

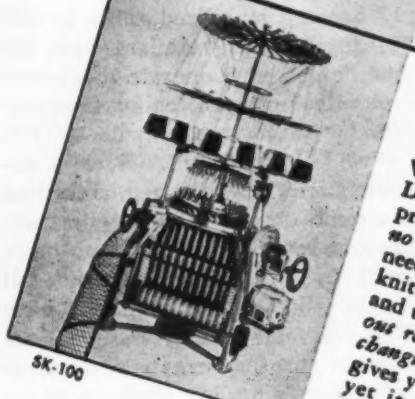
MODEL ML • Knits Pile, Loop and Plush Fabric at 35 Yds. Per Hr.

A multiple feed, loop pattern wheel machine with an unusual knitting elements system, the Supreme Model ML Pile Fabric Machine can produce a variety of cloths for novelties, bed jackets, lingerie, swim suits etc. The cloth can be brushed, napped or used "as is". The 20" diameter—24 feed size and 24" — 32 feed size are standard.



MODEL IC • Knits Fleece Coatings at 30 Yds. Per Hr.

The Supreme Model IC Coating Machine produces heavy and light-weight fleeces and other coating materials, for use in topcoats, over-coats, ski suits, blankets, etc. Ruggedly constructed to withstand continuous operation of heavy wool yarns. The 26" diameter — 36 feed size is capable of producing 54" to 56" finished fabric.



SK-100

MODEL ROF • Knits Oversize "Floatless" Patterns at 30 Yds. Per Hr.

This Supreme "Floatless" Pattern Wheel Machine is equipped with 3 Level Unitary Pattern Wheels to produce oversize pattern fields, *with no loose floats.* With the same set of needles and pattern wheels you can knit and welt, knit and tuck, welt and tuck on any or all feeds, *without resorting to hand selection or changing of cams.* This machine gives you wide pattern versatility; yet it is simple to operate and maintain.

All Supreme Machines feature modern, rugged construction • smooth acting revolving cylinder • adjustable sinker and carrier rings • counter-balanced take-up • steady cone plate bars • pigtail, double tie-ups of yarn cones • electric stopmotions • unit motor drive • positive multi-disc clutch roller-bearing cloth roll-up three automatic idling handwheels • warning and locating lamps and numerous safety devices.

Write for complete information on any or all of these machines.

SUPREME

KNITTING MACHINE CO., INC.

105 Johnson Ave., Brooklyn 6, New York, N. Y.

work harder to get and hold business, but that in itself is a more healthy situation. I believe that for a while, at least, the accelerated export trade and unimpaired buying power of the American people will uphold a firm market for textiles.

"There is no justification for the skepticemia and chiselitis which influence some people into predicting depressions. We can not talk ourselves into recession as long as the people have the money with which to buy and as long as the major portion of life's essentials are in short supply.

"We can not talk ourselves into a depression when money does the talking."

Stanley Hunt, of the Textile Economics Bureau, Inc., reported that the production of nylon will soon far exceed the demand for women's hosiery — and that the material (nylon) will soon be found in knit underwear as well. (This report was based on information furnished by Mr. Beh of the DuPont Company who indicated that upon completion of plants under construction, the supply of nylon yarn would be three times greater than the production at the close of World War II.)

Rayon and Nylon

Hunt, who was armed with a battery of facts and figures, reported on the supply of rayon and nylon knit goods. Speaking of rayon, he said, "The rayon industry spins yarn continuously, 168 hours a week, and today is producing both a yardage and a poundage of rayon to the limit of its capacity."

Greatest increase in production, he said, has come in the high tenacity viscose tire yarn production, which has jumped twelve times its 1941 level. He added, however, that the stock of rayon knitwear in stores is "normal" at last, and declared that "the long war period of extremely low stocks has passed for knit underwear."

AN EYE ON THE KNITTING MILLS

The Valley Knitting Co., Inc., Pottsville, Pa., is undergoing extensive alterations to its entire building, including the addition of several sections. This expansion and modernization program will, when completed, involve a total expenditure of approximately $75,000.

Dyco Mills, recently organized, are now operating a mill in Englewood, N. J., for the manufacture of rayon and nylon nets, and elasticized fabrics, using Kayloom weaving-knitting machines. It is understood that a total of about 25 fabrics of this nature will be developed. Philip Wick is president.

Tower Hosiery Mills, Burlington, N. C., full-fashioned hosiery, have secured OHE permission to proceed with the erection of a one-story addition, to cost about $110,000. Work is expected to begin at an early date.

J. C. Moore Hosiery Co. has been organized with a capital of $200,000 to operate a mill at High Point, N. C. J. C. Moore, High Point, is president.

Star Knitting Co., Inc., has been chartered with a capital of 950 shares of stock, no par value, to operate a mill in Somerville, Mass. A. Caruso is president.

Durant (Miss.) Mfg. Co., hosiery, has awarded general contract for a new addition to the mill, including certain improvements in the present building, and installation of an air-conditioning system. The cost is reported to be close to $100,000, with equipment.

Julius Kayser & Co., Brooklyn, N. Y., hosiery, etc., has plans maturing for an addition to the branch mill at Walton, N. Y., used for winding, warping and weaving of silk and rayon fabrics. The cost is reported to be about $100,000, including equipment.

Duke Hosiery Corp., Hickory, N. C., dyeing and finishing of men's half-hose, has let general contract for a one-story addition, estimated to cost close to $65,000, with equipment.

Dolly Hosiery Mills, Valdese, N. C., are completing the erection of an addition to the mill and will equip for expansion in production of infants' hosiery.

Standard Knitting Mills, Knoxville, Tenn., underwear, has plans for an addition, to cost about $157,400, exclusive of equipment.

Natona Mills, Dallas, Pa., an affiliate of Native Laces and Textiles, Inc., New York, are constructing a one-story plant which will be equipped with levers, lace bobbinettes, high speed tricot and Simplex machines and will include dyeing and finishing equipment.

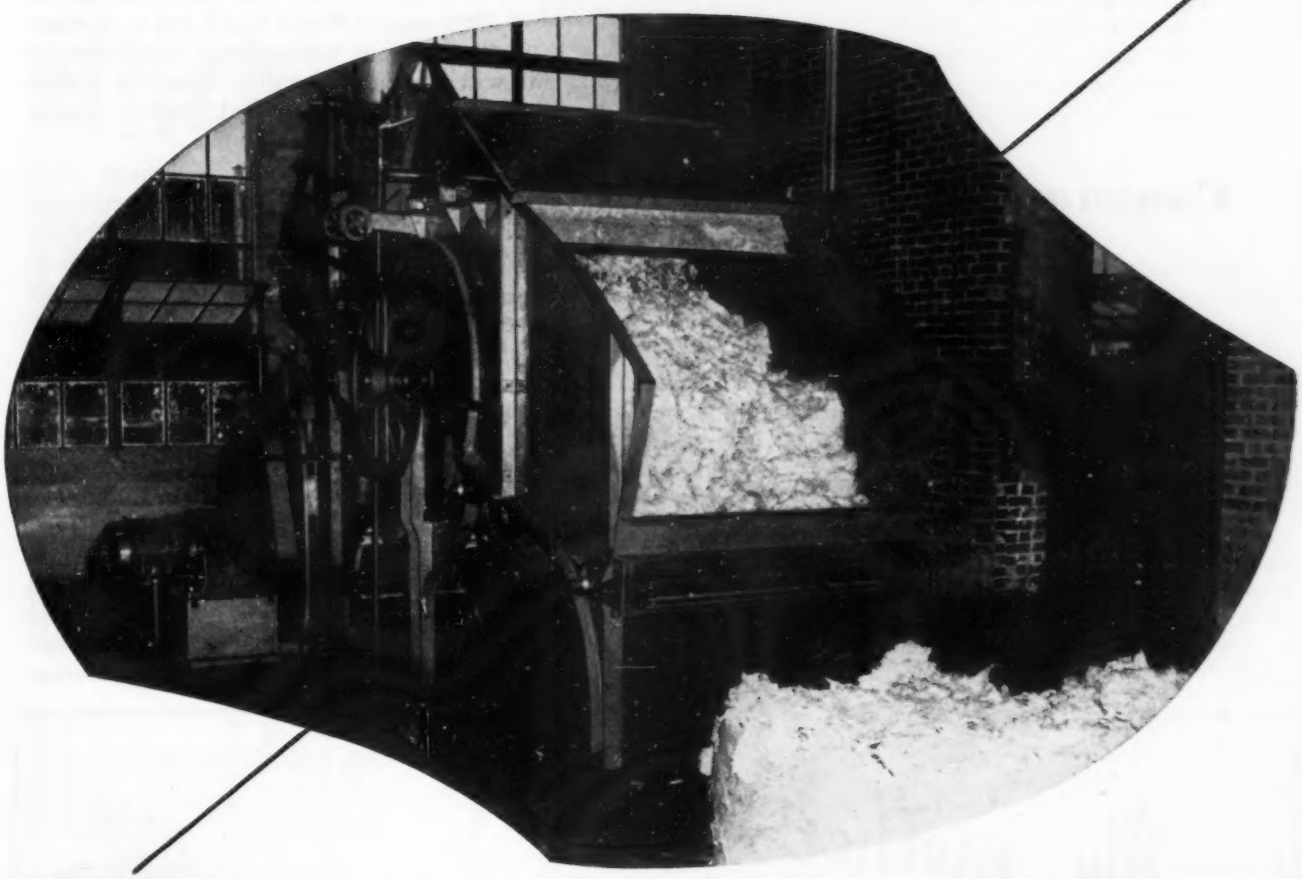
Nylon Business Improving

The retail business in nylon hosiery generally, is better in some places than a number of primary market appraisals would seem to show. Some of the larger manufacturers report inability to furnish their outlets with all the nylons sought. It is said to be indicated that the retailers in many parts of the country have commenced to benefit from the promotional efforts they made when the manufacturers announced lower prices on nylons. The public, it is argued, was more price-conscious then and consumer response has improved since Easter.

The impression also has been created in some quarters that the nylon price situation among the hosiery manufacturers has virtually become stabilized. This is said to imply that retailers and the public can now operate more confidently, with the feeling that any further adjustments will be relatively unimportant. Such a development is well timed, according to some observers, who point out that a sound basis for confidence will benefit the important fall trade which, when combined with the year-end holiday business, accounts for the largest percentage of women's hosiery business at retail.

If wholesale and retail buyers actually are disposed to place more faith in nylon hosiery values, then the manufacturers can rely on it

The Answer to Better Extracting...



PROCTOR Continuous Extracting Unit for Raw Stock

Here are the highlights of the operation of this modern unit, which replaces the laborious intermittent method of centrifugal extracting.

An automatic feed delivers a uniform amount of wet stock to the squeeze rolls. A vibrating plate, arranged between the self-feed and the squeeze rolls, feeds the layer of wet stock into the nip of the rolls in such a manner as to prevent droppage of wet stock or bunching of the material as it goes through the rolls.

Here are the results: There is better opening of matted stock . . . wet spots in dried stock are eliminated . . . production is constant and very high . . . time losses are virtually eliminated . . . operating costs are kept to a minimum.

The initial price of this modern Proctor unit is probably higher than that of any other extracting equipment made. However, when you consider that with it you can combine increased production with improved quality—it is obvious that the Proctor continuous extracting unit will pay for itself many times over. Even with the somewhat higher initial investment, viewed over the long run, Proctor equipment is actually the least expensive.

PHILADELPHIA 20, PA.

PROCTOR & SCHWARTZ INC.

that the future is assured at least until next winter, and accordingly the mills can plan ahead for adequate and economical production. From the production angle, nylon hosiery did not gain much during the spring. In part, this has been attributed to shortage of nylon yarn, with some manufacturers claiming they had to cut back their operations sharply, while others had to shut down for a few days for lack of yarn.

Nylon yarn supply is expected to enlarge around mid-summer, but probably this will not be early enough to have any marked effect on hosiery output until late in the season. Those venturing a prediction say the influx of yarn still will help the fall and holiday trade.

Consumer Income vs Sales

Relationship between individual income (after taxes) and the expenditures of the general public for goods and services lately were the subject of a study by banking authorities. It is reported that this survey brought out the point that even during periods when there are sudden and great shifts in the economic level in this country, the gain or loss of a dollar of consumer income soon was paralleled by a change of around thirty cents in total dollar-volume of retail sales.

This survey also showed that more or less constant contact is developed when income is compared with various segments of retail trade, such as durable and nondurable goods, and even the individual lines. It is conceded that during the war, because some merchandise was not to be had, this prewar pattern did not prevail, but some observers predict that the prewar relationship will soon be restored, with respect to individual lines.

This implies, therefore, that manufacturers of textiles and related end-products ought in the future to keep track of consumer income rather than current reports of retail sales. The survey says, in part, "The record (of the latest world war) has been similar to that of World War I, but . . . a number of factors now might act to sustain consumer spending higher than experienced before World War II."

The financial summary says these factors include the real extent of the wartime savings of the average consumer, and credit now easily available to the average consumer. It is assumed many family groups in this country still have sufficient personal savings from wartime to afford a "cushion" of reserve purchasing power, as related to general merchandise. Government analysts at times have seemed opposed to this view.

In a Washington release published widely during the period when the Administration last summer was trying to preserve price control, it was claimed the average

My mother told me

. . . "that lovely, well-dressed ladies always wear fine, exquisitely finished hosiery. *And,* that smart ladies insist upon dull sheerness, extra strength, elasticity, increased run and snag resistance, spot repellency and lasting beauty in all their hosiery, whether it is of web-like delicacy or a heavier daytime weight."

All these qualities are sealed into the fibre by DuraBeau . . . the hosiery finish that "gives miles more wear" and entices many more customers

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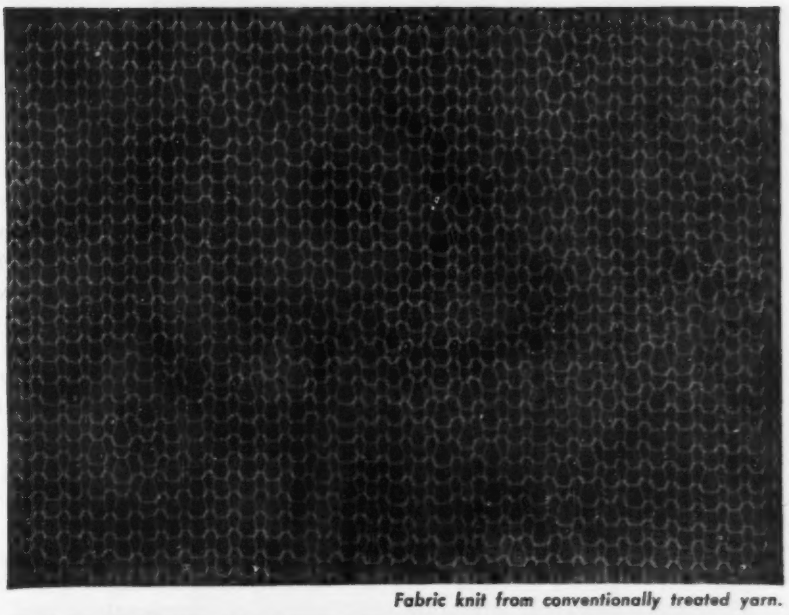
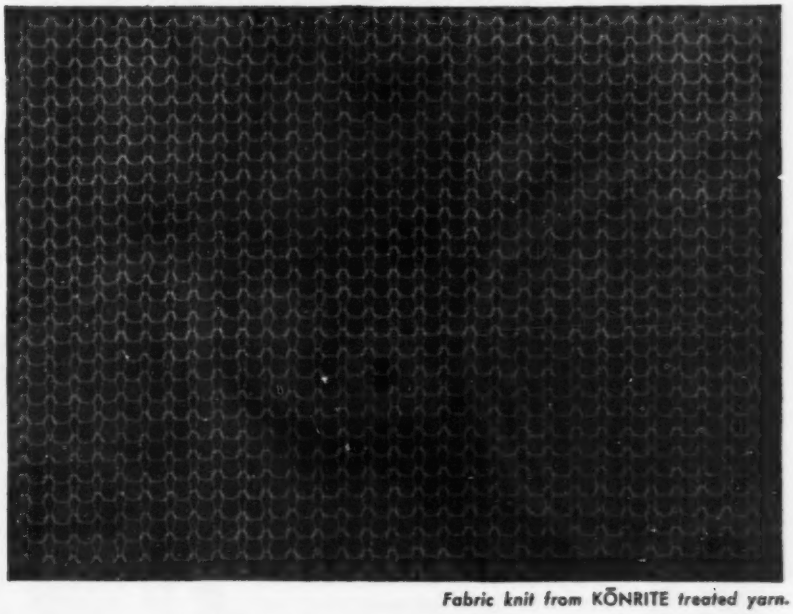
Is your stitch like this



Fabric knit from conventionally treated yarn.

or like this



Fabric knit from KŌNRITE *treated yarn.*

For the treatment of yarns for truly fine hosiery, Nopco presents KŌNRITE, a new and unique nylon coning oil. In Coning, Knitting, Seaming, KŌNRITE offers you:

OUTSTANDING RESULTS...

- ...*in Coning*—produces cones of proper density, practically eliminating overlaps, crossovers and underwinds
- ...increases cone production
- ...*in Knitting*—minimizes stripping of size—reduces pressoffs
- ...gives clear perfect stitch formation
- ...*in Seaming*—reduces roll...its strong defense against curling is a major factor in greatly increased hosiery production

OUTSTANDING ADVANTAGES...

- ...Controlled viscosity, assuring even distribution of oil on yarn
- ...New stitches firmly cemented through rapid drying action
- ...Prevention of softening in lagged yarn and fabric

For full information on KŌNRITE, *please write today.*

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EVOLVED THROUGH RESEARCH NOPCO

Kōnrite The Outstanding Nylon Coning Oil

national annual income of one-half of the families in the United States during 1945 amounted to less than $2,000. The prediction then was made that average net consumer income would probably decrease. More recent unofficial estimates are that "average" net family income will range between a low of $2,000 per annum and a high of around $3,000.

As to consumer credit, the banks' experts say: "A large volume of credit was liquidated during the war. It again is being expanded, thus increasing consumer purchases relative to income. But the prospective volume of such credit is influenced primarily by business expectations and may not be an equally powerful stimulant under all conditions."

The main importance of this Federal Reserve Bank summary appears to be, from the retailers' and manufacturers' standpoint, that as of 1947 the relationship between consumer income and retail expenditure has scarcely changed, and therefore the things to be watched closely are employment in the various fields, as indicating consumers' aggregate income and changes in consumer preferences, including their attitude to prices-versus-quality.

In short, the banks' survey indicates that postwar there has been no new "economic era" ushered in, and, as before, while consumers can be expected to pay their taxes and spend what is left for goods and services, nothing has happened to change the relationship of consumer income to retail sales.

Near-Term Better Than Long View

Upturn in May-June retail distribution encouraged a good many retailers, wholesalers and manufacturers to return to expectations of steadily-expanding, profitable business next year and afterward. They cite that, obviously, the public still has plenty to spend for merchandise and services. The current theory is that, after all, the rest of the postwar adjustment of prices-versus-quality can be made piecemeal. It is conceded that makers and sellers of items that still are overpriced and lack quality may be able to work off their left-over merchandise in conjunction with advertised offerings of fresh-seasonable goods, in assortments intended to appeal to all types of customers.

Seasoned observers in the knitwear and other textile-apparel lines comment that, in such a condition, care should be taken to differentiate between the short-term and the long-term outlook. The May-June retail performance, it is admitted, seems to make brighter the prospects for domestic trade during summer and early fall. It is confessed there are some flaws in this reasoning, but veterans in the markets now believe large-scale domestic business has been given a new lease on life—at exaggerated prices and at profits which, actually, have been trimmed very little.

On the other hand, it is related there is a considerable gap between strictly domestic business

RAIN or SHINE
A textile mill owner, associated with Meinhard Greeff for many years, was asked why he used the services of a factor. "When things are good" he said, "I can well afford them, and when things are bad I cannot afford to be without them."
In fair weather or foul, Meinhard Greeff, with its financial strength and its guarantee against all possible credit losses, provides the shield behind which textile manufacturers can give uninterrupted attention to their talents for merchandising and manufacturing without worrying about the problems of financing and checking credits.
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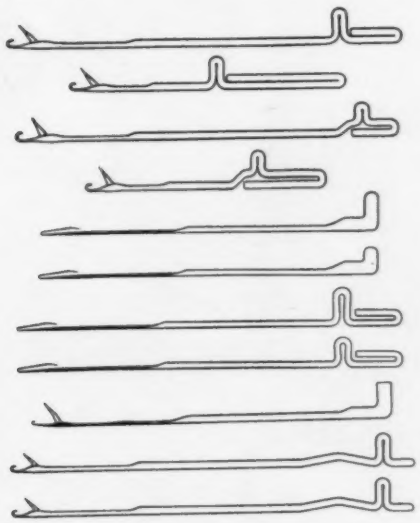
UNDERTHINGS OF SOFT, delicate fabrics which a bride might choose and the heavy underwear for the winter sports enthusiast vary widely in design features. And the Torrington Needles used in knitting them also vary widely in design.

But every one of these needles—and every one of the more than 10,000 needles in the complete Torrington line — has the *same* machine-made, machine-tested quality, the same strength, temper and uniformity that produce flawless knitting. So specify TORRINGTONS — and be safe.



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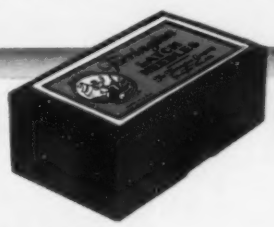

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TORRINGTON LATCH NEEDLE
for every type of Knitting!

Focus attention on <u>your</u> product...

by prolonging its service life, increasing its efficiency and dependability, and reducing operating and maintenance costs. These advantages can be obtained

Through improved anti-friction performance...

provided by compact, high-capacity Torrington Needle Bearings. Wear is virtually eliminated through the even distribution of loads over the full complement of small diameter rollers. Power requirements are reduced to a minimum by Needle Bearings' low coefficient of starting and running friction. Lubricant lasts longer, efficiently retained by the turned-in lips of the outer shell.

Let our engineering staff assist you in the application of Needle Bearings for the improvement of your product.

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in a prosperous country and the distressed conditions prevailing in the rest of the world. The point is urged that right along (and especially in years following a great war) the world becomes more closely-knit, and accordingly the trend in world-wide economics is to emphasize that the "haves" must help the "have nots." In this connection it also is stressed that international schemes so far brought forward whereby the United States can aid distressed countries, appear to concentrate mainly on the theme of using American dollars in fostering the establishment and development abroad of textile-apparel manufacture and distribution on a scale that, in the aggregate, would seriously reduce eventually the export outlets for U. S. goods intended for export.

That is, in the course of our post-war adjustments, due weight has been given to our present textile-apparel productive capacity versus the outlook for consumption at profitable prices of the bulk of the end-items we make, but a certain "spread" has been allowed for exporting any surplus that may arise. It has been foreseen that, with ups and downs inevitable in our domestic economy, the export markets ought to act as a safety valve.

In some quarters in this industry, it is now felt that the program of the International Trade Organization, which lately conducted conferences in Geneva, and has been encouraged by our State Department, in the end probably will be inimical to the export aims of our own manufacturers and distributors. It is outlined that, initially, this program would give distressed countries considerable dollar-credits, to enable them to set up their own industries, which admittedly would help make them more self-sustaining, but in the long run would elevate them into real competitors of ours, in world trade.

Observers stress that a year hence, our own economy may have undergone changes that would make exports a whole lot more significant to our manufacturers than is presently expected, because nearly every foreign country, if furnished with money and materials, can manufacture textiles and clothing, and all have at hand a domestic market they can build on. It is reliably stated that already, cotton and cotton products have experienced a decline in their export demand.

It also is cited that the woolen and worsted ends of the textile industry already have taken alarm and are taking steps to try to protect themselves against inroads of cheap foreign products in 1948.

Credit Grantors Still Cautious

Those charged with appraising the financial condition of customers lately have been closely watching the retail sales trend with the hope that it will persist to the stage where more liberal credit policies can be justified. The general attitude still tends toward skepticism, it is stated, as some credit grantors remain unwilling to pin

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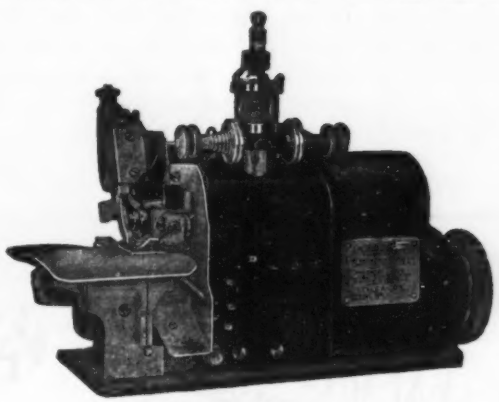
HIGH SPEED OVEREDGING, OVERSEAMING AND HEMMING MACHINES
FOR USE ON
Knitted and Woven Wear of All Kinds



QUALITY RESULTS
HIGH PRODUCTION
CONVENIENT HANDLING
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LOW UPKEEP COSTS

For Best Results Use a Machine Suitably Arranged for Your Work

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KALPINOL
for NYLON HOSIERY

. . . a Kali lubricant that reduces friction on the needles and sinkers and also makes carrier tubes last longer.

For cleaning nylon size from your needles, sinkers, bits, etc., use K.N.K. (Kali Needle Kleaner). It can be used straight, or mixed with equal parts of water without seperating.

Yarns wet with Kalpinol give a good stitch, then dry within two inches of the needles. Stitch remains set. Birdseyes or slipping of the stitch are avoided. Rolling is prevented, making seaming easier.

ONE OF A FULL LINE OF KALI TEXTILE CHEMICALS

KALI MANUFACTURING CO.
Manufacturing Chemists
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their hopes on a spurt that may not carry through. Others, however, for a considerable period have looked for worse trouble than actually developed, and thus they admit being cheered by any gain, however slight it may be.

In the knitwear and other apparel lines, it is now reported, summer goods seem to be moving nicely, with fairly substantial reorders. The turnout at the fall openings was said to be encouraging, though in many cases the orders have not yet been booked. It is cited that nobody expected a heavy surge of buying and many sources were surprised at the number of "token" orders they took.

In the textile-apparel lines, it is reported collections still range from slow to moderately good. Most creditors are "going along" with established customers, because they know a forced sale of debtors' goods would result in losses, and thus they remain willing to grant extra time. It has been recalled that while insolvencies are on the increase, they still remain well below the "normal" for prewar. A year ago commercial failures were relatively few.

The smaller retailers presently are the most serious problem, but their difficulties seldom engage the interest of manufacturers, it is stated. Such outlets mainly obtain goods from wholesalers, whose scrutiny of such accounts commenced last fall, and by now a definite program has been worked out by most suppliers, aimed toward keeping the majority of their small customers in business.

Retail Spurt is a Tonic

The retail business is described as having "opened up" again since the Easter season. This development is reported extensive enough to warrant encouragement for final disposal of textile-garment production during last half of 1947. It is cited that, week by week, Federal Reserve reports on retail dollar-volume sales have continued above the reports turned in for the like period last year.

It is figured that the mass purchasing power of the country evidently has not shrunk as much as was feared last winter. People are buying. This is construed as showing that the average customer is not alarmed for the future.

During May the pay envelopes of a large part of unionized workers reflected wage boosts of varying amounts, approximating 13 to 15 cents per hour, and retroactive grants back to April 1 and in some cases to March 1. Last month these wage earners had a much greater intake than during the average week of the first 1947 quarter, it is stated. Mail order, variety chain and department store sales reports in May are said to have almost immediately reflected this trend. Also, buying of retail offering on credit expanded during May.

Studies recently completed by the Federal Reserve Banks are said to show that this close connection between net earned income and retail expenditures was not much changed during the war period and lately has been restored to the prewar pattern. In some quarters it is conceded this affords knitwear and other manufacturers an approximate guide for the future, especially as the Reserve Banks' researches seem to indicate the foregoing holds good even when consumer spending is "broken down" into definite categories.

It will be recalled at end of 1946, many knitwear retailers and those handling numerous other consumer lines, found themselves possessed of slow-moving stocks. This was assumed to represent definite customer resistance and some authorities termed it a "buyers' strike." During the first 1947 quarter, however, the customary signs of an all-out "strike" of consumers failed to materialize, and after an initial fanfare of price reductions (real or alleged) among retailers, the excitement gradually evaporated.

Seasoned observers remark that it remains that consumer acceptance of offered goods at stated prices is likely to be conservative, as a general thing, but in some parts of the country during the past few weeks there has been evidence of consumer spending "simply for the fun of it." That is, in some localities, retailers have sold more general merchandise items over the last few weeks, than they disposed of in the items that were "set up" for mass disposal, by advertising and other promotional advantages.

SOFTER, BETTER KNITTING COTTON YARNS—DYED OR BLEACHED—

with Laurel Emulsions

Laurel Emulsions—Hydrocop and 3B Softener—condition and soften cotton yarns, mercerized, dyed or bleached. Used by hundreds of mills for over 25 years to assure proper regain, speed up twist, produce even-running yarns and clearer stitch. Laurel Hydrocop and 3B Softener will not turn rancid or discolor yarn on standing. Easily applied over roller trough or cone winders, quilling frames, or twisters. If you want softer, better knitting yarns to help you meet specifications, send for a trial order of these veteran emulsions, Laurel Hydrocop and 3B Softener today.

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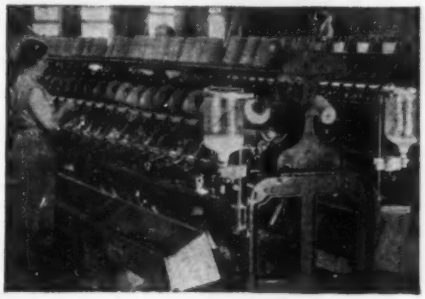

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. . . more economical to use because . . . .

it runs more efficiently, producing a finer quality product that can be sold easier and more profitably

Made of Durene multi-ply mercerized cotton

4 WAYS BETTER than ordinary cotton

EXTRA COMFORT ...more absorbent

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EXTRA QUALITY ...lasting beauty

EXTRA SERVICE ...easy to wash

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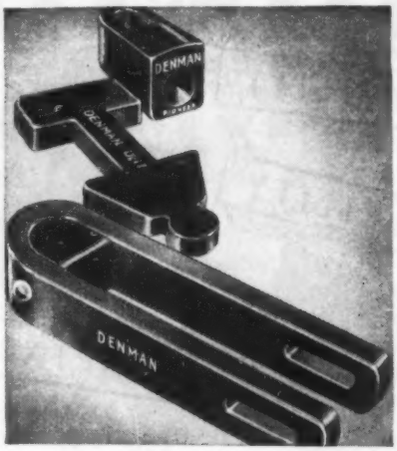

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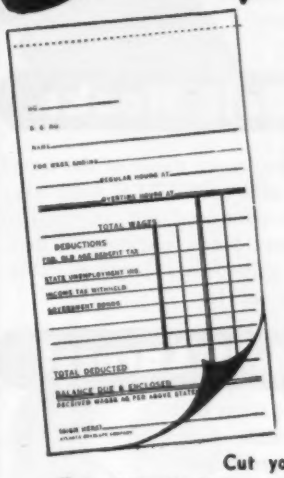

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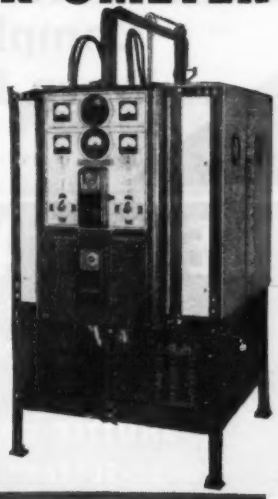

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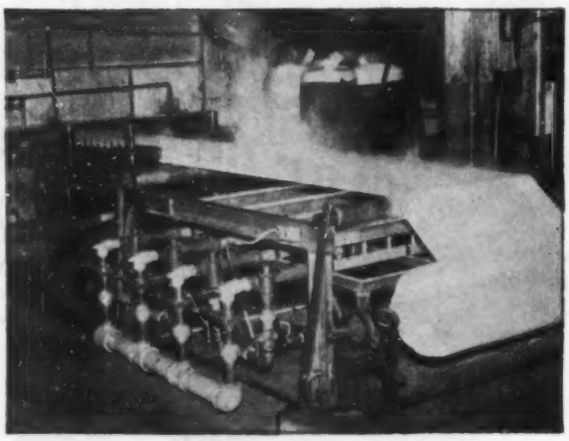

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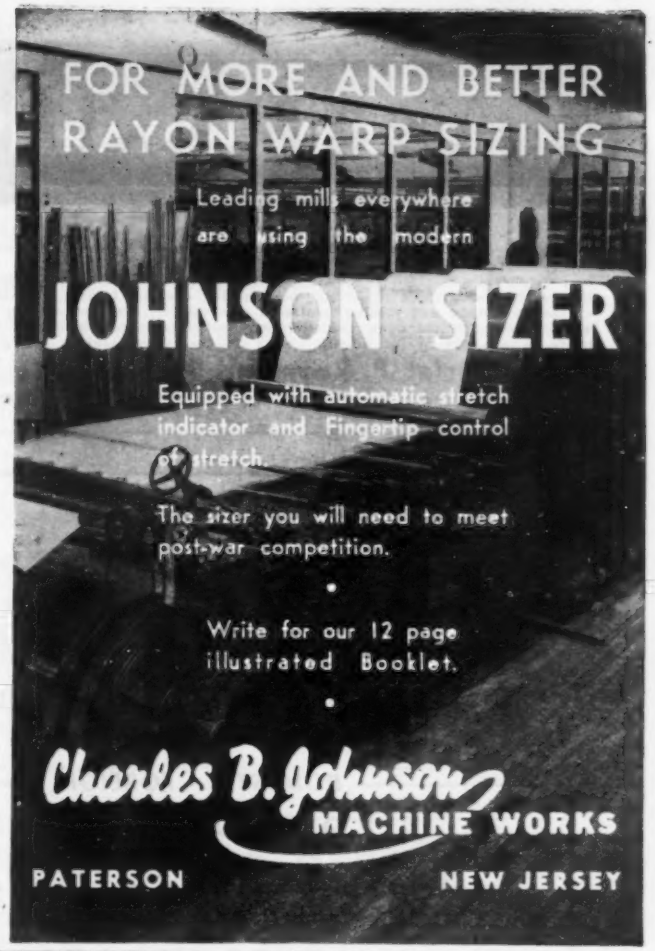
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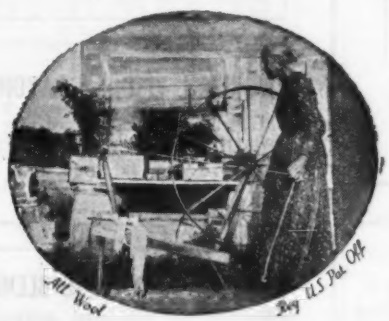

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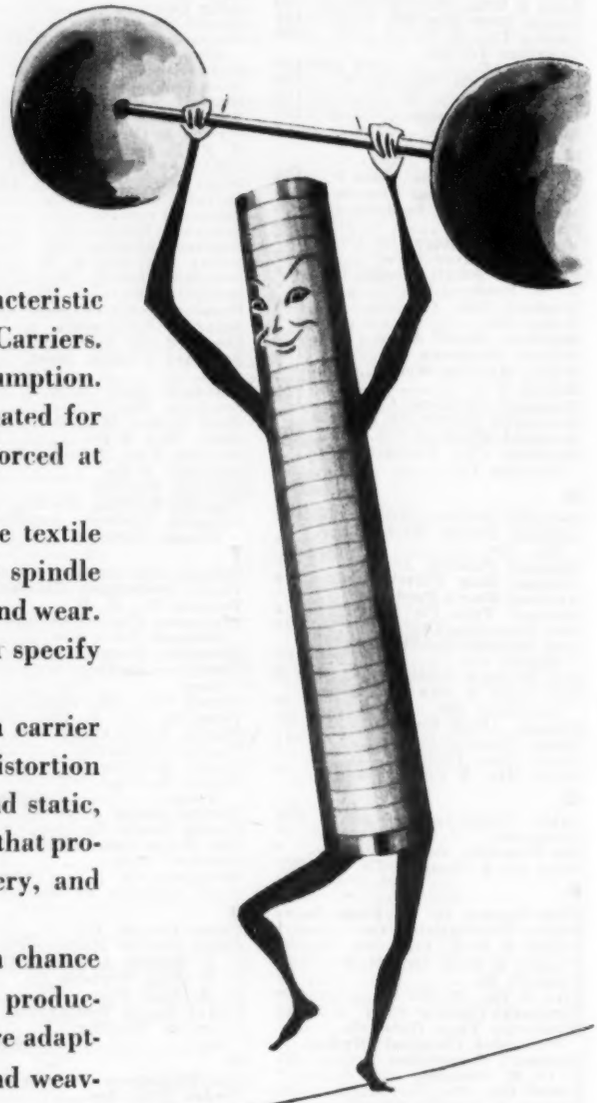

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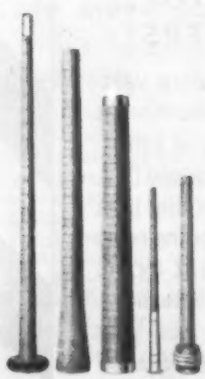

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AMERICAN PAPER TUBE COMPANY

ESTABLISHED 1898

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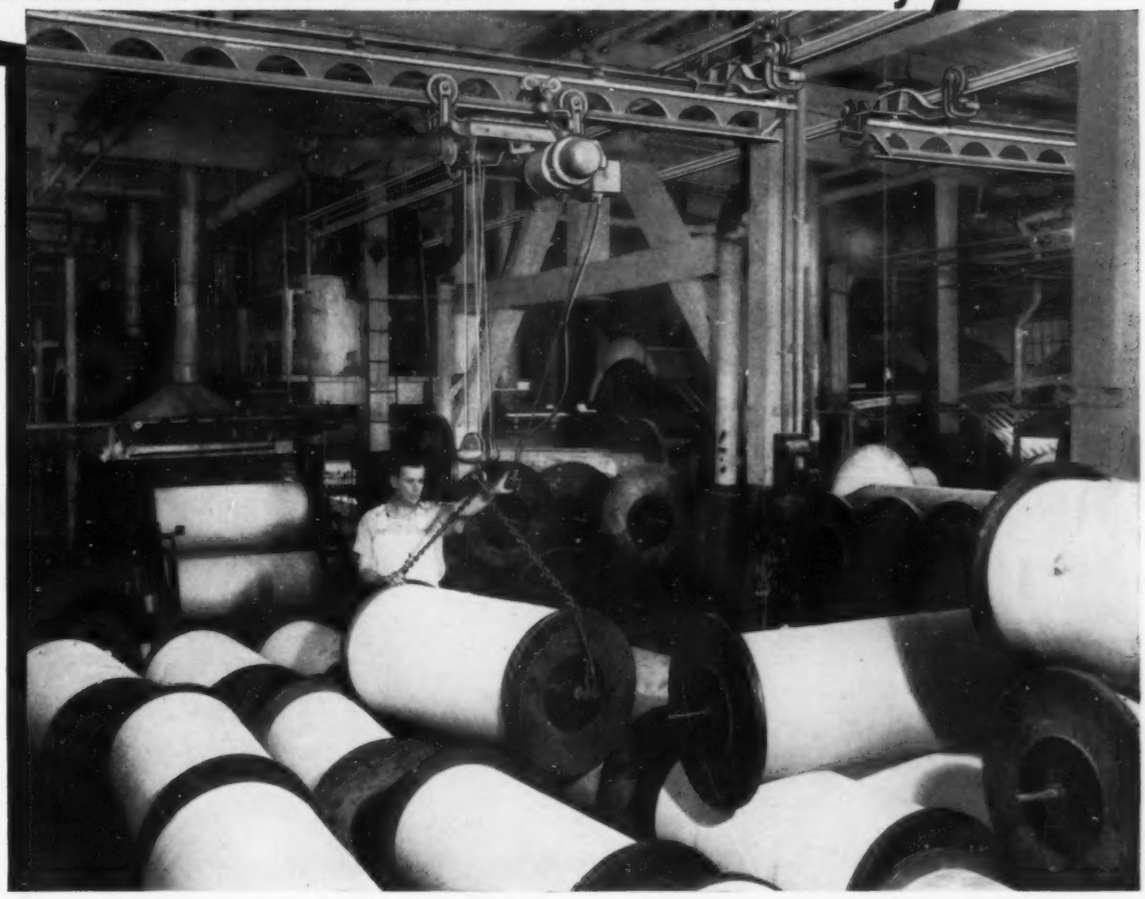

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